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THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XL. SATURDAY, JANUARY 7, 1882. NO. 1.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE ANTIPYRETIC TREATMENT OF TYPHOID FEVER,

BY BATHS, SPONGING THE BODY, AND THE WET SHEET.

Delivered at Bellevue Hospital,

BY AUSTIN FLINT, M.D.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE AND OF CLINICAL MEDICINE IN BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

GENTLEMEN: As introductory to the subject of this lecture, I ask to be indulged in giving some personal reminiscences. More than thirty years ago my interest was enlisted in the clinical study of the continued fevers. This was not long after the publication, in this country, of the translation by Bowditch of the great work of Louis, containing researches which established the clinical history of the typhoid fever in France, of that day, and not less of the typhoid fever of to-day in all countries. The observations by Gerhard, Shattuck, and others had recently been published, showing that typhus fever, as existing in Ireland, and as imported into this country, was a species of fever distinct from the typhoid fever studied by Louis. It was a mooted question at that time whether typhus and typhoid fever were varieties of one species of fever, or essentially different diseases. This question elicited much discussion at the annual meeting of the New York State Medical Society in 1850, and a committee was appointed, of which I was made chairman, to collect facts relating to the question. I was in this way led to study analytically, following the numerical method of Louis, all the cases of continued fever which, up to that time, I had recorded. The number of cases amounted to fifty-two. The results of the analytical study of those cases were embodied in a report. In 1851 I had collected the recorded histories of forty-eight additional cases of typhus and typhoid fever. I subjected these cases to an analytical study, and embodied the results in a second report. Again, in 1852, I studied in the same manner sixty-four cases of typhoid and typhus fever, which I had recorded since 1851, and the results were embodied in a third report. The whole number of cases analyzed thus were one hundred and sixty-four.

One advantage in studying these three collections of cases separately was, the results obtained from the collections severally could be brought into comparison with each other. The three reports were published in a volume in 1852. I may be permitted to refer to this volume for several reasons. It was my first-born of a bibliographical brood, which has since become somewhat numerous. It is not in a condition now to speak much for itself, as it has long been out of print. The edition was small, and, moreover, the volume was printed for the author, having only a nominal publisher, so that it never had a fair chance for much circulation. But it represents the employment of most of my leisure hours for a period of three years. Aside from the personal benefit derived from the studies, compensation for the labor was found in a remarkable correspondence with the results of Louis' researches as regards the clinical history of typhoid fever—a correspondence corroborating the accuracy of his researches, and going to show that the disease retains its historical characteristics in different countries and at different periods. I began the analytical studies with belief in the identity of typhus and typhoid fevers, but the studies converted me to the opposite opinion, and this opinion is now held by most, if not all, medical writers. In collecting my histories, I stumbled upon a number of cases of relapsing fever, and these were the only cases of this disease which, up to that time, had been reported in this country, except some recorded by Clymer, in 1846.

My subject to-day is the treatment of cases of typhoid fever by the antipyretic employment of cold water. I may mention the fact that, in my second report, I studied the effects of the wet-pack in five cases. By the "wet-pack" I mean enveloping the body in a wet sheet, and over it dry blankets, after the method of the so-called hydropathists of that time. This measure cannot act by the direct abstraction of heat; but it is entitled to be called an "antipyretic measure," for it is often followed by a considerable reduction of temperature. As such, it deserves more consideration than it appears to have received. Within late years I have known it to prove signally useful in many cases of febrile disease. When my reports were written, the thermometer had not come into clinical use, the intensity of fever being estimated by the subjective symptoms together with the sensation of heat communicated to the hand applied to the skin. The effect of the wet-pack, in my cases, was excellent; but I was deterred from continuing my observations by the occurrence of apoplectic coma in a case in which this measure had been employed with very marked immediate benefit. There was no ground for supposing that the treatment had anything to do with the occurrence of the coma; but, as the measure was then a novelty in medical practice, I considered that I would be held responsible for any accidents that might subsequently take place.

The following quotation from my second report expresses my ideas of the value of external refrigerating treatment at that time: "The direct effect of an increased disengagement of caloric, it is not improbable, may contribute to some of the evils of the febrile state. The most effective refrigerating measures, which possess much potency, are external applications, and these are *cold water* and *cool air*. Ablutions with cold water are usually grateful to the sensations of patients affected with fever, and abate, frequently in a striking manner, the increased heat and dryness. The simplicity of the measure causes it to be lightly esteemed by attendants, and sometimes, perhaps, by physicians. It is really an important part of the treatment of a large proportion of fever cases. The face, body, and extremities may be sponged, in succession, several times a day, or as often as the heat and dryness of the surface return. A faithful, judicious nurse may occupy a considerable portion of the time with these ablutions to the advantage of the patient. Should cold water occasion uncomfortable sensations (which is rarely the case), tepid or even warm water will secure, by evaporation, part of the refrigerating effect. The evaporation will be more rapid if spirit be added to the water. Cologne, or other perfumed spirits, may be employed for this purpose. Cold water, taken into the stomach, exerts a refrigerating effect on the skin and the system at large. Patients should be allowed to drink freely. The refrigerating effect of cool air is important. This is one of the useful ends of free ventilation. To secure this end, the patient should be lightly covered, and ventilation between the bedclothes attended to." These views, published thirty years ago, foreshadowed those which

at this moment hold the most prominent place in the treatment of fever.

Since the commencement of the session (1881–82), we have treated in this hospital [Bellevue] several cases of typhoid fever. In all the cases, except some in which the temperature of the body did not rise above 103° F., the reliance has been mainly on antipyretic measures, together with those of palliation and support. Antipyretic measures have been for several years mainly relied upon in treating the cases of this disease which have been received in the medical division of the hospital with which I am connected. The number of cases treated antipyretically is not large, being only fifteen.[1] These cases, however, have been observed closely, and the histories recorded with much painstaking on the part of the members of the house-staff who have had the cases in charge. During the whole, or the greater part, of the course of the disease, the temperature and the pulse have been noted every hour or two of the twenty-four hours in most of the cases. I propose, in this lecture, to give the results of the analytical study of these cases. I shall not challenge your patience by reading the histories. To do this would be intolerably tedious. From the histories I shall select the facts bearing on the following points of inquiry: (1.) The different modes of employing, externally, cold water, and the general rules observed in their employment. (2.) The antipyretic effect obtained, the time required, the duration of the effect, and the repetitions of the different modes of employing cold water for the reduction of temperature. (3.) The mortality and the duration of the disease in these cases. (4.) The employment of quinia as an antipyretic remedy in these cases. (5.) The employment of alcoholics. (6.) The dietetic treatment and the medicinal remedies employed.

1. *The different modes of employing externally cold water, and the general rules observed in their employment.*—In a few cases the cold bath was employed, that is, the patients were placed in a bathing-tub, in water of a temperature of 80° F., and the temperature reduced by the introduction of ice to about 65° F. This mode may be called, for the sake of distinction, the ice bath. It was soon discontinued on account of the inconveniences attending it, and it was not resumed because the employment of other modes appeared to secure all its advantages. The other modes were the sponge bath and the wet sheet with sprinkling. The sponge bath was often found to be notably effective. To obtain the utmost efficiency of this mode, the whole body exposed to the air is sponged with cold water, and the sponging continued steadily for a considerable time. As will be seen presently, the temperature of the body may, in many instances, be satisfactorily reduced by this mode. The wet sheet, however, is more effective. In carrying out efficiently the latter, the body is wrapped in a wet sheet, and sprinkling with water from a watering-pot, repeated at intervals of a few moments. The patient need not be removed from the bed if it be protected by a sufficiently large India-rubber cloth, but the cot known as "Kibbe's cot," is to be preferred. An ordinary cot-bedstead answers, however, very well. This mode of refrigeration is vastly more convenient than the bath-tub; it can be better regulated as regards the degree of cold, the duration of its employment, etc.; it is less likely to prove hurtful, and it may be made equally efficient. In most of the cases the sponge bath and the wet sheet were employed at different times during the progress of the disease.

The general rule with regard to the employment of these modes was to resort to one of them whenever the axillary temperature exceeded 103° F., and to continue it until the temperature was reduced to at least 102°. The temperature during the continuance of the employment of cold is, of course, to be taken in either the mouth or the rectum. The symptoms, aside from the temperature, were noted, and if at any time the pulse became feeble, the respiration disturbed, or the lips livid, the measure was at once discontinued. Alcoholics were often given during the continuance of the sponging or of the wet sheet with sprinkling. It will be seen that the wet sheet, in many instances, was continued for many consecutive hours.

2. *The antipyretic effect obtained, the time required, the duration of the effect, and the repetitions of the different modes of employing cold water for the reduction of temperature.*—In order to present as succinctly as possible the facts pertaining to these points of inquiry, which are contained in the histories of the cases severally, I have arranged them in a tabular form, and they will appear in a paper which I am preparing for publication in *The Medical News*.

I have found, on comparing these tables in respect of the number of repetitions of the employment of cold during the course of the disease, that they present notable differences. The number of ice baths given in all the cases was 5, of sponge baths 129, and of the applications of the wet sheet 64; the total number being 207; the number of repetitions of the sponge bath in one case not having been fully noted. Excluding the 4 fatal cases, the lowest number in any case was 3, the sponge bath having been employed once and the wet sheet twice in this case. In the case offering the next lowest number, 4 sponge baths were given; the highest number was 51, the ice bath having been employed 5 times and the sponge bath 46 times in this case. The next highest number was 18, this number of sponge baths having been employed. Now, the question arises, did the employment of cold in any of the cases have an agency in preventing permanently a rise of temperature, which would have occurred had cold not been employed? I think we may answer this question affirmatively; but much allowance is to be made for the differences to be observed in different cases of typhoid fever in the degree of fever-heat, irrespective of any treatment. Cases are not infrequent in which the temperature never rises above 103°. If, however, the temperature for a short time rise to 104° or 105°, and, after the employment of cold three or four times only, there is no further rise to 103°, it seems fair to attribute a certain amount of agency to the antipyretic treatment in preventing a subsequent degree of fever sufficient to call for a repetition of the treatment.

Notable differences in respect of the length of time required to produce an antipyretic effect are to be observed. The effect was produced by the ice bath in 30 minutes, by the wet sheet in 25 minutes, and by the sponge bath in 20 minutes. These were the shortest periods required; the longest were 20, 11, and 10 hours. Between these extremes, the length of time in the different cases varied much. This was true not alone in different cases, but at different times in the same case. It is evident that there are no known laws regulating the length of time required to produce an antipyretic effect. No judgment can be formed beforehand as regards this point; it can only be determined by experimental observation, and the result of the antipyretic treatment on one day is not to be relied upon in judging of the probable effect on other days during the course of the disease.

The statements just made respecting the length of time required to produce an antipyretic effect by the employment of cold, apply still more strongly to the production of this effect. Looking over the figures in the column devoted to this heading, it is found that variations were great. For example, in one case the

[1] It was subsequently ascertained that two additional cases had been overlooked.

consecutive durations are 10 days, 1 hour, 48 hours, and 24 hours. In another case consecutive durations are 2½, 13, 3, 20, and 5 hours. In another case, after consecutive durations of 6, 15, and 8 hours, the temperature before the last of these periods being 104°, there was no future rise to 103°. There is no approach to such a regularity in the successive periods during which the antipyretic effect continues as to point to any appreciable law. After the reduction of temperature has been effected, the previous experience, even in the same case, furnishes little ground for predicting the length of time during which the temperature will remain reduced. Nor is it practicable to judge beforehand, from either the duration of the antipyretic effect or its degree, of the amount of the rise of temperature which will take place. Nor, again, can any inference be drawn from the temperature which exists when cold is employed, whether or not hyperpyrexia will again occur.

In several instances a decline of temperature takes place after the discontinuance of the sponge bath or the wet sheet. The time during which the decline took place varied from 15 minutes to 15 hours. This fact was noted three times in one case, twice in two cases, and four times in one case. In one case the temperature was increased while the patient was in the wet sheet, reduction afterward taking place. So far as an inference is to be drawn from this collection of cases, it is not the rule, but the exception to the rule, for the temperature to decline after the discontinuance of either the sponge bath or the wet sheet.

It is not to be denied that the facts in these cases are not sufficient to test the relative value of the wet sheet and the sponge bath as contrasted with the ice bath. The latter was employed only five times and in only two cases. In each instance the temperature was promptly reduced. But there were instances in which the wet sheet and the sponge bath proved equally effective. The facts contained in the tables show that by means of the sponge bath a satisfactory antipyretic effect may be often obtained. This being the simplest mode and most easily employed, it may be first tried, and, if it fail, the wet sheet substituted. These two modes, singly or successively employed, will, as I believe, render unnecessary the use of the bath-tub. The wet sheet may be made more or less efficient, according to circumstances, by sprinkling at longer or shorter intervals and by using water of different temperatures.

Finally, I would call attention to the fact that in no instance could any immediate harm be attributed to either of the three modes of the employment of cold. In no instance were there symptoms following their employment so closely as to indicate that the patient had suffered injury therefrom. As a rule, the reduction of temperature was accompanied by improvement in other symptoms. Patients sometimes complained of discomfort, but this probably arose from the reluctance to be disturbed rather than from any unpleasant effects attributable to the cold; oftener they expressed a sense of comfort during its employment.

The number of cases in this collection is not sufficient for testing the influence of the antipyretic measures of treatment on the fatality from typhoid fever. In this regard, however, they may be considered as having some value. Of the fifteen cases, death took place in four. Two cases of recovery, in which the same measures of treatment were employed, were overlooked prior to the completion of the analytical study of the fifteen cases. Adding the two additional cases, the fatality was four in seventeen cases. This fatality is not far from the average rate in collections of cases otherwise treated. So far as any deduction is warrantable, it may be said that the antipyretic measures neither increased nor diminished the fatality.

The duration of the disease in the cases ending in recovery was determinable with precision in nine cases. The shortest duration was nine and the longest twenty-seven days. The mean duration was seventeen and a half days. The latter is one day and a half longer than the mean duration in forty-two cases analyzed by me thirty years ago. The commencement of the disease in the cases now and in those formerly analyzed was dated from the time of taking to the bed. In the cases now analyzed the fever was considered as having ended when the temperature had fallen to within the normal range, that is, from 98° to 99°.

It cannot be said that the mean duration in the cases now analyzed is evidence that the disease was shortened in its course by the antipyretic measures of treatment.

In the four fatal cases the shortest duration was fourteen and the longest thirty-four days. The mean duration was twenty-one and a quarter days. Post-mortem examinations were made in three of the four cases. In none of the three cases were grave complications found after death. Death took place in all by asthenia. In no case was there any ground for the belief that the antipyretic measures of treatment had any agency in the fatal termination.

3. *The use of Quinia as an Antipyretic Remedy.*—The sulphate of quinia was given in several instances, as an antipyretic remedy, in conjunction with the employment of cold. The instances are noted in the tables. How much effect may have been produced by the quinia in these instances cannot be determined with accuracy. Inasmuch, however, as the reduction of heat effected by the two was not greater or more rapid than often by cold alone, it is fair to conclude that the agency of the quinia was not great. In a few instances quinia was given for an antipyretic effect without being conjoined with cold. In one of these instances the temperature fell in eight hours from 103¼° to 102° after 30 grains of the sulphate of quinia. In another instance 20 grains were given, and two hours afterward 25 grains. In two hours after the last dose the temperature had fallen from 105° to 103¼°. In another instance 15 grains of the sulphate of quinia were given, the temperature being 104°. In five hours the temperature fell to 103¾°. Ten grains more were given, and in two hours the temperature was 102°. Ten grains more were given, and in two hours the temperature was 102¼°. A fourth dose of 10 grains was then given, and in four hours the temperature was 100½°. Ten grains three times were given on the following day, the temperature ranging from 100½° to 99°. These doses were continued during the next day, and the temperature rose to 102°. The patient was much cinchonised, and the remedy was discontinued. In another instance 20 grains of the sulphate of quinia were given, the temperature being 102¼°. In three hours the temperature had risen to 104°, and the wet sheet was then employed.

4. *The use of Alcoholics.*—In the treatment of these cases alcoholics were given to meet indications relating to the circulation. In some of the cases no alcoholics were given. The quantity given was regulated by the frequency and fulness of the pulse, and diminished intensity of the first sound of the heart as heard over the apex. Whiskey was the form generally used.

5. *The Dietetic Treatment.*—The chief article of diet during the course of the disease was milk. From one quart to two quarts were given daily, lime water being added.

6. *The Medicinal Treatment, exclusive of Quinia.*—In some of the cases no drugs whatever were given. Those which were given, exclusive of quinia, had reference to the palliation of certain symptoms. Digitalis was given in some instances for its tonic effect upon the heart, and ammonia as a cardiac stimulant. Opium

in small doses was sometimes given for diarrhœa. The medication was chiefly limited to these remedies.

From the study of these cases it may be concluded:

1. That by the employment of cold water externally in cases of typhoid fever, the temperature of the body may, after a variable time of the continuance of the employment, be reduced to 102° or lower.

2. After a period varying very much in different cases, and, also, at different times in the same case, the temperature, as a rule, again rises as high as, or higher than, before the reduction.

3. Repeating the employment of cold as often as the axillary temperature exceeds 103°, the number of repetitions required in different cases is extremely variable.

4. The sponge bath and the wet sheet with sprinkling may be employed to the exclusion of the bath-tub in the antipyretic treatment in cases of typhoid fever as well as of other febrile diseases.

5. These modes of employing cold water may be continued sufficiently long for the reduction of temperature to 102° or lower, and repeated as often as may be required, without risk of any immediate injury, and the study of these cases furnishes no ground for supposing that a liability to complications or accidents is thereby increased.

6. Reduction of temperature by these modes as often as it rises, in the axilla, above 103°, improves the condition of the patient. The cases now studied do not afford proof either that the fatality of typhoid fever, or that its duration is thereby diminished. The study of these cases, however, renders it possible that this proof would be afforded by a larger collection of cases.

During the period that the cases now studied were treated, seven hospital cases were recorded in which antipyretic treatment was not employed. In most of these cases the temperature did not rise above 103°, and it was for this reason that the treatment was not employed. Of these seven cases three were fatal, but I need not say that it would be unfair to draw any deduction from the contrast as regards the proportionate number of fatal cases. It is well known that, in general, resistance, toleration, and recuperation are not as well exemplified within as outside of hospitals. Moreover, in cases of typhoid fever, patients are not admitted into hospital until some days after the commencement of the disease. The clinical test of therapeutical measures, as far as fatality is concerned, is therefore best afforded by the study of cases in private practice.

7. The results of the analysis of these cases, although not sustaining the statements of Liebermeister and others respecting the controlling influence of the employment of cold externally in cases of typhoid fever, yet not only show this method of antipyretic treatment to be safe, but afford encouragement to employ it with the expectation of diminishing the severity of the disease and its danger to life.

ABSTRACT OF A CLINICAL LECTURE

ON THE RECOGNITION AND TREATMENT OF THE EARLY STAGES OF POTT'S DISEASE.

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(Reported by J. WILLIAM WHITE, M. D.,

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GENTLEMEN: There is, perhaps, no disease in which it is more important to recognize the early and premonitory symptoms than the one with which the little patient before you is affected, and which is variously known as Pott's disease, angular curvature, antero-posterior curvature, and caries of the spine. Each of these titles is in some respects objectionable. The name of Mr. Percival Pott has been associated with the disease because to him we owe the first correct exposition of its pathology and treatment. It, however, conveys no information as to the character of the ailment, and although the most common, is perhaps the least useful of its designations. Angular curvature and antero-posterior curvature are names derived from certain symptoms which are not invariably present, and which do not usually appear until what might be called the second stage has been reached. They therefore, as has been pointed out by Mr. Howard Marsh, are liable to mislead the practitioner by causing him to regard them as necessarily to be found at all periods of the disease. Neither is caries of the spine, although present in a large majority of cases, an absolutely constant pathological condition in such patients, the characteristic symptoms being sometimes produced by a process of interstitial absorption, which goes on to destruction of the bodies of the vertebræ without the ulceration and suppuration which are essential elements of true caries.

We may say, however, that, call it by what name you will, the disease is one in which, owing to one or the other of these processes, a disintegration of the vertebral bodies takes place, producing, *first*, irritation of the spinal nerves as they pass out through the intervertebral foramina, and, *second*, a crumbling of the affected bones under the superincumbent weight of the head and body. When this breaking down of the vertebræ occurs in the anterior portion of their bodies, as it commonly does, and when, as is also usually the case, it is attended with the production of pus, we have the more or less marked deformity, and the psoas, iliac, lumbar or dorsal abscesses, which, as a rule, characterize this period of the disease and render it easy of recognition.

I shall confine myself to-day, however, to calling your attention specially to the symptoms belonging to the first stage, which, in nearly every instance, are due to nerve irritation, and which, taken together, should almost unfailingly lead to the detection of the true nature of the malady, at a time when proper treatment will often result in complete cure without disfigurement, but which in practice I find are usually not recognized until this all-important period has passed. Any one of these symptoms may be the first to attract the attention of the child's family; but, as a rule, you will be consulted in reference to a supposed alteration in the little one's disposition, a tendency to avoid all active amusements, a slight dulness or peevishness, or general malaise, which only becomes noticeable or alarming on account of its persistence. If you will at this time carefully observe the movements and posture of the child, you will see that its motions are restrained, that it carries itself with unnatural stiffness, that its gait is possibly a little shuffling, the feet not being lifted from the ground, and that when standing or sitting it leans forward and rests its hands upon the knees or anterior portions of the thighs. You should now at once reflect that these symptoms are all explicable on the theory that some change is going on in the spinal column, probably in the vertebral bodies, but, possibly, in the intervertebral substance, which has set up an irritation in the spinal nerves, and has rendered them unduly sensitive; that, on account of this condition, play has become distasteful, as requiring muscular movement which produces at least a sense of discomfort; that the slight jarring or concussion of ordinary walking gives rise to pain; and that to remove pressure from the inflamed structures, the child, through the medium of its arms, instinctively transfers the weight of its head and shoulders to its lower extremities.

You then proceed to look for further symptoms of nerve irritation, and will, probably, by careful investigation, elicit some or all of the following:

Hurried or grunting respiration on slight exercise,

due to involvement of the nerves supplying the external respiratory muscles—serratus magnus, quadratus lumborum, intercostals, etc.

Pain in the shoulders, the walls of the thorax, or in the lumbar region, the seat varying with the portion of the spine affected by the disease.

Pain at the pit of the stomach, resembling an ordinary "belly-ache," but due to irritation of the spinal nerves, which, in common with the sympathetic, supply the intestines. This pain, like that of colic, is temporarily relieved by the prone position, pressure on the bowels controlling to a certain extent the irregular and spasmodic action of their muscular coats, which is associated with both these conditions, or, in other words, fulfilling the same function as the roller bandage in fractures.

Fidgety movements of the feet from implication of the crural or sciatic nerves, or their trunks of origin.

Pain in the hip, knee or thigh, due to the same cause.

Pain on jumping, coughing, sneezing or sudden turning, or on any movement which takes place while the dorsal muscles are relaxed, or, so to speak, "off guard."

Pain elicited by pressure upon the head or shoulders, and strictly localized, involving a small area directly over a definite part of the spine. Conversely, it will be found that the pain, if constant, will be relieved by placing the child in a prone position across the knees, and then separating them gently, so as to make traction in opposite directions upon the two extremities of his vertebral column.

Hyperæsthesia, also limited to a definite region, and detected by passing a hot sponge along the vertebral gutters. Evidences of pain are often manifested when the diseased part is reached.

Peculiar, and very characteristic, method of reaching objects lying upon the ground. The patient will lower himself not, as would be natural, by any movement of the body, which will be held rigidly perpendicular, but by flexing the knees and thighs until the hand touches the desired article. In rising, the same care will be observed to avoid flexion or rotation of the spine.

I do not desire to be understood as teaching that all of these symptoms are without exception present in the early stages of Pott's disease, but you may rest assured that in nearly every case you will find several of them, and that you will be able by their means to make your diagnosis and to apply your treatment.

The latter, both in principle and practice, is extremely simple. When you recall the condition upon which the symptoms depend, and remember that its progress is hastened and its severity increased by pressure and by the weight of the head and upper portion of the trunk, it at once becomes evident that surgical interference must be directed towards a removal of these sources of aggravation of the original trouble.

The recumbent posture, strictly adhered to and continued for a period long enough to permit of the gradual subsidence of the inflammation, the absorption of its purulent or cheesy products, and the development of new fibrous or bony material to consolidate and strengthen the affected vertebræ, would meet all the therapeutic indications. In young children this may be thoroughly carried out, the enforced rest only terminating with the occurrence of anchylosis, particularly if the disease be situated in the cervical or cervico-dorsal region. In the great majority of cases, however, this is hardly feasible; the natural restlessness of the child, and the absence of careful and continuous attention on the part of the parents, who see no marked external evidence of disease, usually sufficing to thwart this plan of treatment or to preclude its persistent employment. The same indications should then be met by the application of a mechanical apparatus, to be worn uninterruptedly, and which will permanently remove all weight from the inflamed bones.

Of all those which have been devised for this purpose, two only are worthy of mention, viz., the plaster-of-Paris jacket applied in the now well-known manner, or a leather jacket, accurately moulded and fitted over a plaster cast taken from the patient. The latter dressing, although more expensive at first, is lighter and more durable than the plaster, and answers the purpose of support equally well. With either of them, where the disease is situated above the lumbar region, the head-suspension apparatus becomes a necessary addition to the jacket. Both of these appliances act by shifting the weight of the head and shoulders from the spine to the irregular surface of the thorax, abdomen and loins and to the margin of the pelvis. When anchylosis has occurred, which may be known by a gradual disappearance of the symptoms, the jacket may be dispensed with, removing it at first for a few moments each day, and gradually lengthening the interval, until it is left off altogether. In conclusion, I would caution you against the common and harmful assumption that in every case some mechanical support can be employed, by means of which the patient can with safety be allowed to go about. In certain cases, fortunately not very numerous, where all these dressings give rise to pain, or in which the deformity appears and increases in spite of them, they should be withdrawn, the only possible hope of arrest or cure of the disease depending then upon strict and protracted recumbency. In conjunction with any of these plans of treatment, fresh air, sunlight, nutritious food, cod-liver oil, iodide of iron, and the phosphates constitute useful hygienic and therapeutic adjuvants.

ORIGINAL ARTICLES.

ON THE ERGOT TREATMENT OF DIABETES INSIPIDUS:

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IN April, 1875, I communicated to the College of Physicians of Philadelphia[1] the details of a case of diabetes insipidus treated by ergot. So far as I know, this case was the first in which this agent had been systematically and successfully used. As attention was called to the matter, ergot has since been tried by a number of observers. My own experience with it, too, has been now comparatively large, and I think that altogether, from the lapse of time and the accumulating records, we are in a position to endeavor to determine its true value. I shall first narrate briefly some of my own cases. But of the first case, as it has been fully published in the Transactions of the College, I will only here say that I have seen the man of late years, and that he continues in excellent health. This is a record of case No. II.

CASE II.—A young man, twenty-one years of age, a patient in the Pennsylvania Hospital in 1877, of good family history, except that his mother died of consumption. He passed on an average ten pints of urine daily, of specific gravity 1005, of acid reaction, and without a trace of albumen or sugar. The disorder came on gradually, and, when he first noticed it, he was in excellent health. There was actually no cause to which it could be assigned, unless, perhaps, to work and worry,

[1] Transactions of College. Vol. I., 3d Series.

or to a doubtful history of a strain in lifting a heavy weight. He never had had venereal disease; he had received no injury to the head or spine; he had not had a sunstroke; there was no malarial history. His digestion was fairly good; the bowels were rather constipated; no disease of the heart, lungs, or any of the viscera could be discerned; the temperature was normal, or below the normal, 98°. He had lost flesh steadily and rapidly, and was strikingly emaciated when I saw him in the hospital, about six months after the outbreak of his malady. He complained of nothing but of debility, of a feeling of weakness in the small of the back, of the incessant urination, and of an irritability at the neck of the bladder, with a sense of burning, for which no adequate local cause could be discovered. He declared that he was not very thirsty, and that he passed more water than he drank. Unless he deceived us, such was indeed the case. We measured the fluids of every kind he took; they never exceeded six pints, and we cut them down to four pints; whereas, he passed not less than eight, and oftener ten pints in the twenty-four hours. He was very restless. There were occasionally chilly sensations and flushes of heat, and he was sometimes bathed in perspiration, but there were no night-sweats.

After observing his case, while he was taking no medicine and under varied diets, and finding it uninfluenced, he was placed on drachm doses of fluid extract of ergot three times, subsequently four times, daily, and for four days, six times daily. In a few days after the beginning of this treatment, he was no longer obliged to get up at night, and the pains had all left him; the flow had decidedly decreased. On the eleventh day he was noted to have greatly improved, and to have passed but five pints in the twenty-four hours. On the twenty-second day of treatment, he was voiding a little less than four pints of urine, and his whole condition was better. The ergot was reduced to a drachm three times daily. It had, throughout, not given him any inconvenience, unless a rather greater tendency to constipation was caused by it. This was met by the occasional administration of castor-oil. On the twenty-fifth day the ergot was still further reduced; he only got thirty minims thrice daily, and was discharging three and a half pints of urine, of almost normal specific gravity. On the thirtieth day the remedy was stopped and a little peppermint water given. He was passing but three pints of urine, while drinking five pints of fluids. His general condition was very good; but he was placed on cod-liver oil, under which he fattened and grew strong. An operation of phimosis was performed on him, which seemed to relieve the irritation of the bladder. He remained under observation in the hospital about three weeks after the ergot treatment was suspended; towards the last, taking nothing. The urine voided was about three pints daily, some days even a little less. He was discharged cured, in January, 1878, in fine health. As he has not reappeared, I think he has remained so.

CASE III.—A miner, admitted into the Pennsylvania Hospital September 29, 1876. There was an excellent family history, and the man himself had been in good health until the last few years; he never had had rheumatism or syphilis. In 1874, without assignable cause, he began to suffer from severe pain on the right side of the face and head, and the headache gradually became more continuous and localized in the right temple. There was never vertigo or vomiting, but loss of memory and irritability of temper; and the vision was much impaired, that of the right eye being lost. An expert, after his admission into the hospital, found blue atrophy of both optic nerves, complete on the right side. But besides the headache, the most annoying symptom was the discharge of about eighteen pints of urine daily, with considerable attending thirst, and a harsh, dry skin. The urine was clear, faintly acid, of specific gravity 1003, containing neither albumen nor sugar. There was no fever temperature. He was ordered one drachm of fluid extract of ergot three times daily; the urine, the next day, fell to fifteen pints. On the sixth day, the ergot was increased to two-drachm doses. In the course of a fortnight the urine had been reduced to four and a half pints, and the man had otherwise improved; he had less headache.

October 22, he complained, however, of severe frontal headache and dimness of vision; there was no increase of the urine. The ergot treatment was suspended, and ten grains of bromide of potassium given every second hour, with the subsequent addition of a few drops of deodorized tincture of opium. He was only passing two pints of urine. On the 27th, the urine had increased to five pints; he had still a good deal of headache, and restless nights. On November 1, he was observed to have a fever temperature, to be very excited and alarmed and delirious. The urine could not be measured, as it was passed involuntarily, but it was small in quantity. It was evident that he was suffering from an acute attack of meningitis superadded to previous disease. But as the case was made the subject of a clinical lecture, an abstract of which was published in the *Medical and Surgical Reporter* of January 6, 1877, it is unnecessary to go here into further details. It is only incumbent, for our present purposes, to state that the man was freely purged, and placed on iodide of potassium; that the acute symptoms lasted about two weeks, and that neither then, nor until his discharge, on December 6, did the urine become again of low specific gravity, or exceed four pints in the twenty-four hours, although the iodide of potassium was continued. Not only the acute symptoms, but the previous steady headache, greatly improved, and the man left the hospital apparently in good health, to return to his work.

CASE IV.—Joseph G., forty-two years of age, formerly a soldier in the U. S. Army, was admitted October 19, 1877, into the Pennsylvania Hospital. He had been in good health until three weeks before admission, when he had chilly sensations coming on every morning for a week, and lasting three hours. After continuing for a week, they terminated abruptly without medication; it is most unlikely that they were malarial. The temperature was 98.5° ranging to 99°; there was some œdema of the legs, but it was of short duration. He passed large quantities of urine, clear, acid, of specific gravity at first 1015, then less, and not containing either sugar or albumen; in amount the urine varied for the most part between five and a half and seven pints daily. A consolidation was found to exist at the right apex, associated with a moderate amount of cough. He took fluid extract of ergot, a drachm three times daily, for about a week, continuing an iron preparation on which he had been placed. But it produced no result, and as the temperature rose, reaching at one time 100.5°, and the signs of pulmonary consolidation at the apex became more manifest, his treatment was entirely altered. The temperature soon subsided again, and was for ten days lower than normal, ranging between 98° and 97.5°. At the end of this period, the urine was about five and a half pints daily; the chest symptoms were quiescent. He was placed upon full diet and strychnia; at first one-thirtieth of a grain three times daily, then one-fifteenth. In a week this treatment had no effect; in sixteen days he was passing but four pints daily, and was very much stronger and better. In about two weeks afterwards he was discharged at his own request, greatly improved; the signs of right-sided apex consolidation remained; the cough was very slight.

CASE V.—G. S. applied at the Jefferson Medical Col-

lege Clinic on the 23d of May, 1878, with excessive flow of urine. He was a dyspeptic, troubled with flatulency and occasional vertigo, and a feeling of soreness in the limbs and across the abdomen and the back. There was no cause to which the inordinate flow of urine could be directly traced; he stated that the weak back of which he complained, and his other symptoms, began with chilly sensations about a year before; but the flow of urine has been coming on for two years. He was found to have tubercular deposits, not extensive, at the apices of both lungs. It was impossible to get him to measure accurately the amount of urine passed in twenty-four hours; he kept a record of the night urine, and it was frequently eight pints. It was of low specific gravity, and contained neither sugar nor albumen.

The man was placed on fluid extract of ergot, half a drachm three times daily, which was subsequently increased, and he was directed to take nourishing food. In two weeks' time he had greatly improved, the soreness was entirely gone, and the quantity of urine largely decreased; how much he did not ascertain for us by measurement, but he was not obliged to rise at night nearly so often. On account of the dyspeptic symptoms, a mixture of five minims of tincture of nux vomica, ten of dilute phosphoric acid in compound infusion of gentian, was now administered three times daily, and the ergot no longer steadily used. He continued to do better and better until July 15, the urinary flow being no longer a prominent feature of his case, when he discontinued his visits. The lung affection had not increased.

CASE VI.—W. H. S., thirty years of age, applied at the Medical Clinic of the Jefferson Medical College, in October, 1879, on account of great weakness and excessive flow of urine. There was an old history of syphilis, a more recent one of severe malaria, contracted in the spring of 1878 in Texas, and which had broken out again in April of 1879. He was very pale and weak, had lost much flesh, and complained greatly of pains throughout the body, and especially through the limbs. But his chief disturbance was from the quantity of water he passed, some days not less than fourteen pints, six pints of which were voided at night. We made him measure the urine for three consecutive days; the record was eleven pints, ten pints, ten pints. This was on a varied diet; he had tried a restricted diet, such as a diabetic patient would employ, and no change was perceptible. The record of the three days alluded to was below his usual average. The urine was very pale, of specific gravity 1006, free from sugar or albumen. He was very thirsty, but thought he passed more fluid than he drank. The extreme flow had existed for a month. He was somewhat dyspeptic, with a tendency to constipation; the spleen was decidedly enlarged, the liver somewhat so, and he complained of tenderness over these organs, especially over the spleen. Just before he had malarial fever his horse fell on him, bruising his left side, since which time he has always had pain and some soreness there. Nothing else abnormal was discovered; the skin appeared to be acting fairly well. He was placed on a full diet and on ergotine, which, however, was soon exchanged for half a drachm of fluid extract of ergot three times daily. He did not improve; indeed, about a week after this treatment was begun, he passed, November 10, sixteen pints; 11th, eighteen pints; and in twelve hours of the 12th, twelve pints. An attempt was made to increase the dose of the fluid extract of ergot, but it did not suit his stomach, and we returned to the use of ergotine, in three-grain doses three times daily; while, for the constipation, an occasional pill at night was administered, consisting chiefly of small quantities of podophyllin and aloes. 13th, the urine was sixteen pints; 14th, twelve pints. This improvement slowly went on, and with it the man's general condition became better. 20th, lactate of iron was in addition prescribed. The urine on the 26th had been reduced to eight pints in the twenty-four hours, and at about this it remained until December 7, when the record was seven pints. The lactate of iron was now stopped, while the ergotine was continued, and gradually increased to six grains three times daily. A tonic mixture containing $\frac{1}{10}$th of a grain and 15 m. of tincture of the chloride of iron was also given three times daily; but from this, on the 21st, the strychnia was omitted. December 16, the record was five pints in the twenty-four hours; 21st, the same. The specific gravity rose with the decreasing quantity; diminution of the spleen was noted, and continued improvement in general health; the soreness and the pains had nearly gone. 31st, he passed four and a half pints; January 5, 1880, he felt himself well enough to go to work, still voiding that amount of urine, or some days a little more.

On the 15th, he reported that he was quite able to do his work, was gaining flesh, but that his appetite was failing, and that the bowels, notwithstanding occasional purgative pills, were costive. He thought the ergotine was disagreeing with him, and it and the iron mixture were stopped; the urine had not increased in quantity, nor returned to a low specific gravity. One-thirtieth of a grain of strychnia, with five minims of dilute muriatic acid in glycerine and water, was given three times daily, and the laxative pill already mentioned at bedtime. February 1, was gaining, the soreness of the limbs was nearly gone, the appetite was good; he passed four pints of urine daily, or rather less. A pill was required every night to ensure a movement the next morning. 14th, he reported continued improvement; for four days the amount of urine passed was not more than when he was in health, and he had discontinued measuring it; the strychnia was only given twice daily, the pill alternate nights. As the same favorable report continued March 1, with the addition of the statement that he felt as well as he ever had, the medicines were gradually abandoned. April 1, he was in as good condition as when last seen; the strychnia had been entirely stopped for a week; the laxative pill was taken every third or fourth day.

On June 14, after hard work, he had a slight relapse. The urine, which had remained normal in quantity, increased to eight pints in twenty-four hours; the tired feeling in the limbs returned. But the relapse was of short duration; it readily yielded to the former strychnia prescription, taken twice daily, and by the 20th he was again well. The strychnia was, however, continued for a month. August 1, 1880, he had not taken the remedy for two weeks; he remained well, and so he has until now.

When we look at these cases, we find five recoveries out of the six, and in two the patients have been since under observation, and it is positively known that the recovery from the disorder is lasting; of the other three, it is most likely that such is the result. In the case in which the treatment did not succeed, ergot was only tried, though in decided doses, for about a week, and, as it produced no effect, and there was a pulmonary complication, it was exchanged for strychnia, under which the patient did better, although not rapidly. The evidence of improvement in all in which improvement follows, is not only seen in the decreased flow of urine and its increased specific gravity, but in the better nutrition, the lessened thirst, the altered state of the skin, and in the subsidence of a symp-

tom to which I shall call particular attention, and which the analysis of these and others of my cases has impressed on my mind,—the pains in the limbs and body, and the feeling of soreness without tenderness. It is not my object to discuss here matters of general pathological and clinical import, but rather to bring forward the results of a special plan of treatment, or I should do more than merely touch upon this point; I should also do more than merely speak, in passing, of the connection with pulmonary disease, which two of the cases exhibited. In one there was a catarrhal pneumonia, in another a tubercular affection; and I have lying before me the notes of two others, the first of which, beginning with catarrhal pneumonia, I had the opportunity of following subsequently, to the autopsy, with pneumonic phthisis. Here the lung affection followed the polyuria. In the case described in this paper (Case V.) it was the same; at times the reverse appears true. There seems to be more than coincidence in the occurrence; and the matter, both with reference to chronic catarrhal pneumonia and phthisis, is well worthy of careful analytical study.

The treatment under discussion is not a difficult one to carry out. Here and there a stomach rebels, and the continuance in sufficient doses becomes impossible. Then, too, we may not be able to keep the ergot up long enough to effect the cure alone, though long enough to have practically broken up the disorder, for the urine does not again decidedly increase. Under such circumstances, as in Case VI., I have found strychnia an admirable remedy to follow the ergot treatment with, either as a permanent or temporary substitute; in other instances, wherever the ergot is continued, cod-liver oil becomes a good adjunct. The dose of ergot must be a decided one—at least one drachm of the fluid extract three times daily; better still, if well borne, twice that quantity. Case VI. took in place of ergot three grains of ergotine, increased to six thrice daily. But, on the whole, I prefer the ergot itself in extract. I have never seen any disagreeable consequences from the doses mentioned; never dilated pupils, markedly slower pulse or breathing, or vertigo. Some headache, and perhaps an aggravation of the existing constipation, are, besides any gastric disorder, the only unpleasant signs of the impression of the medicine. It takes generally about one week for it to show a decided influence.

As to the mode of its action, it is chiefly by the contraction of the capillaries; but where? in the kidneys or in parts of the nervous system, in ganglionic or cerebro-spinal nerve centres? Most likely in the centres. But our knowledge of the exact pathology of diabetes insipidus is too uncertain to speculate much on the manner in which a drug affects it. Then, too, there are classes of cases in which ergot is not likely to do much good; those, for instance, with a distinct cerebral lesion. But here, the character of the lesion will make much difference. Thus, in Case III., where it was probably meningeal to a great extent, the effect was very good. In degenerative diseases of the fourth ventricle, and brain tumors pressing there or elsewhere, ergot is not likely to be of benefit. But this is mere surmise; for we know nothing as yet from direct observation, as we do of cases of polyuria dependent on gummata cured by mercurial inunction[1] or by iodide of potassium. In instances of excessive flow of urine associated with renal disease, ergot only acts temporarily or not at all. We have at present under observation at the Pennsylvania Hospital, a man (August S., Men's Medical) who came in passing 225 ounces of highly albuminous urine. He has been voiding a large quantity for three years, with one decided intermission. At first he was dropsical, but this was early in the case, and before the excessive flow, which at one time reached 300 ounces. He is now passing 182 ounces after a two weeks' treatment with ergot, increased gradually to half a drachm of the fluid extract of ergot eight times daily; belladonna did no better.

Ergot has been in the last few years tested by others than myself, and I shall analyze such of the recorded cases as I have met with. Dr. Tyson[2] publishes a failure. The drug was given in sufficient doses, one drachm of the fluid extract three times daily, increased to two drachms. It answered well for a short time, but not permanently, and its use was exchanged for gallic acid, which did better, although it is not known whether the improvement was sustained. On the other hand, ergot has been successfully employed by Sydney Ringer, Murrell, Rendu, Saunders, and McClellan.

Sydney Ringer's case[3] was a very marked one of the disease. It happened in a man thirty-eight years of age, of temperate habits, in whose family there had been many cases of consumption. The quantity of urine varied from 9 to 22 pints. The patient was much troubled with thirst, loss of appetite, dry skin, and constipation. The disease was uninfluenced by quinia, cod-liver oil or jaborandi. But on three occasions the quantity of urine was greatly reduced by ergot. Thirty minims of the liquid extract every third hour, was the dose last employed. The urine was in twenty-four days brought down to a pint and a half daily. The man has been seen after the lapse of four and a half years,[4] the urine is normal in quantity, and he is strong and well.

In a case reported by Murrell,[5] the patient, a lad, had first taken belladonna with advantage, but without a permanent result. He was subsequently placed on ergot in aggregate daily doses of two drachms, kept up fully for a month, the quantity of urine falling from 3174 cubic centimetres to from 1700 to 1983 c. c. daily. The patient ultimately died from hemorrhages away from the hospital, and after a prostrating sea voyage. The improvement in the urinary secretion, it was thought, was permanent.

Rendu[6] details a case of polyuria cured by the administration of powdered ergot, at first given in doses of 50 centigrammes for six days, and sub-

[1] Mosler. Virchow's Archiv, LVI.
[2] Transactions of the College of Physicians of Philadelphia. Vol. II., 3d Series, 1876.
[3] British Medical Journal, December 25, 1875.
[4] Wm. Murrell, *ib.* May 8, 1880. [5] Ibid., January, 1876.
[6] Bull. Soc. Clin. de Paris, 1879, vol. ii, p. 8, and La France Médicale.

sequently of a gramme. The affection followed a fall into the sea. Valerian had been found to be useless, and atropia did not suit, and was soon discontinued.

Saunders[1] has given us the history of a woman fifty-three years of age, who became so enfeebled by the excessive flow of urine, from sixteen to twenty pints in the twenty-four hours, and the constant thirst, that she was unable to attend to her household duties; the skin was dry and harsh, the bowels excessively constipated. She suffered greatly from pains in the back and side, and had been ailing for two years. Fluid extract of ergot, one drachm three times a day, reduced the urine so rapidly that it alarmed her. The remedy was kept up for two or three months; a few relapses being occasioned by its unauthorized discontinuance. A perfect recovery took place, and when last seen, she had been in excellent health for months.

Surgeon Ely McClellan,[2] U. S. A., treated a case successfully with ergot that had been uninfluenced by full doses of quinia. It was only of some weeks' standing when seen; but the patient passed from twenty to twenty-four pints of urine daily, of specific gravity of 1008, and the inclination to urinate was at night so urgent that he was almost deprived of sleep. Inordinate thirst, impaired appetite, and serious constipation were also very troublesome symptoms. Fluid extract of ergot, in half drachm doses, was administered every four hours. At the end of the first week, the amount of urine had sensibly diminished; at the end of the second week, it was reduced to one-half, and the thirst had almost disappeared. The remedy was then given three times daily for two weeks longer, when all the symptoms disappeared. Seven months after treatment had been suspended, the man remained well, passing forty-seven ounces of urine daily, of specific gravity, 1020.

On the whole, then, ergot makes good its claim to confidence in the treatment of diabetes insipidus. That it always succeeds, even when faithfully used, will not happen. But it is pleasant to be able to confront the statement of so recent and distinguished a writer as Senator,[3] that "the prognosis of diabetes insipidus is, in respect to recovery, very doubtful," with the array of cases here brought together.

[1] St. Louis Courier of Medicine, October, 1880.
[2] Louisville Medical News, January 22, 1881.
[3] Ziemssens' Cyclopædia, Transl. Vol. XVI.

EXTIRPATION OF THE LEFT KIDNEY ON ACCOUNT OF A LARGE FIBRO-CYSTIC TUMOR—RECOVERY.

BY T. GAILLARD THOMAS, M.D.,
SURGEON TO THE NEW YORK STATE WOMAN'S HOSPITAL.

IT may now be safely assumed that the operation of nephrectomy, or extirpation of the kidney, is one of the recognized and legitimate procedures of surgery. That this operation is one of necessity, and that without a resort to it, lives which by it could be saved, would necessarily be lost, no one can doubt who examines, even in the most cursory manner, the literature pertaining to the subject.

Fifty-seven cases are now on record, or rather that which I now relate makes this number complete, and from this array certain conclusions may be drawn as to the wisdom of resorting to the procedure, and the propriety of considering it one of the legitimate resources of the surgical art.

Mr. A. E. Barker,[1] writing in April of this year, declares that the number of cases on record up to that time was 54; that of these 26 recovered and 28 died; that lumbar operations show rather better results than those through the abdomen; and that in 11 out of the 54 cases, over one-fourth of all reported, an incorrect diagnosis had been made.

H. Braun,[2] writing in August, cites 56 operations. Of these 28 were laparotomies, with a result of 18 deaths and 10 recoveries; and 28 were lumbar sections, with 9 deaths and 19 recoveries.

The pathological conditions which have heretofore called for the operation, have been neoplastic growths, such as cysts, fibro-cysts, and sarcomas; cancerous disease; floating kidney; calculus; hydronephrosis; tuberculous kidney; and fistulous connection between the ureter and the uterus, or vagina.

It has repeatedly been performed upon very young children; for example, by Czerny upon a child eleven months old, by Kocher upon one two and a half years old, by Jessop upon one of the same age, by Hüter upon one of four years, and by Thornton upon one of seven years. Of these only two cases recovered, Jessop's and Thornton's.

I now proceed to give the history of the case which has called forth this paper.

Mary P., a native of Germany, 21 years of age, a pale and rather delicate person, was admitted to my service in the Woman's Hospital, October 13, 1881. Upon examining her I found in the abdomen a soft and obscurely fluctuating tumor, about as large as the uterus at the eighth month of utero-gestation. This was centrally placed, fell well down into the pelvic cavity, was perfectly movable, and was not tender upon pressure. The patient gave evidence of no special or peculiar symptoms, except that of very severe and constant pain in the abdomen. Her suffering was so great that she declared that she could no longer tolerate the tumor, and must have it removed. I saw no reason to suppose the tumor to be other than ovarian, and arranged for ovariotomy on the 15th of October, the patient being at once put upon preparatory treatment.

The operation was performed on October 15. As soon as the abdominal walls and peritoneum were cut through, I passed in my finger, discovered between the tumor and the symphysis pubis a large coil of intestine, and at once felt convinced that the growth was not of ovarian origin, though as yet no suspicion of its real nature entered my mind.

There was so much solid material about it that I had to enlarge my incision before I could puncture with the trocar. When I did so, six pounds of an amber-colored fluid poured away, the appearance of which led me to ask an assistant who was collecting some of it in a vial for examination, whether it was

[1] Lancet, April, 1881.
[2] Deutsche Med. Wochenschrift, 31, p. 421, August, 1881.

not urine. Now for the first time the thought of hydronephrosis presented itself to my mind. It was found, however, not to be urine.

I found the tumor everywhere adherent, and recognized the fact that to remove it, it would be necessary for me to tear it out of its bed. As I proceeded, a large number of ligatures became necessary, and a good deal of blood was lost.

Professor A. C. Post now suggested that a mass at the upper extremity of the tumor looked like the kidney, and, upon examination of this, it was found to be so. I now included all the emulgent vessels and the ureter in one ligature, severed the mass, and dropped the ligated portion back into the abdominal cavity.

The patient was then put to bed, and the ordinary treatment after ovariotomy was ordered. For the first three or four days she suffered such severe pain at the epigastrium that morphia had to be used hypodermically very freely for its control, and the temperature showed a tendency to rise. As the importance of the case, however, calls for a day to day history, I avail myself of the notes of the house surgeon of the hospital, Dr. Andrew F. Currier, to whose assiduous and intelligent care I feel greatly indebted.

On the 16th, at noon, the temperature was 102°, but by the douche, applied after Kibbee's method, which I invariably employ after ovariotomy when the temperature becomes exaggerated, it was reduced to 100½°. The pulse during this day ranged at about 100.

On the 17th, the morning temperature was 102½°; the evening, 100½°, being kept down by the douche. Pulse, same as yesterday.

18th, morning temperature, 100°; evening temperature, 101¾°. Pulse ranged at about 100.

19th, A.M., 100°; P.M., 101°. 20th, A.M., 100⅕°; P.M., 99¼°. 21st, A.M., 99¾°; P.M., 101°. 22d, A.M., 99¾°; P.M., 101°.

After this the patient progressed very favorably, and, with the exception of a mural abscess, presented no troublesome symptom, and at the present date, one month from the time of operation, she is up and fully convalescent.

The gross appearances of the tumor were these. The whole mass, fluid and solid, weighed 10½ pounds. The tumor growing from the capsule of the kidney on the convex surface of the organ, bent it over backwards so as to make this surface concave, and to render the portion on which was the hilus convex. The structure of the kidney appeared to the naked eye entirely healthy.

The tumor was submitted for examination to Dr. Welch, the pathologist of the hospital, and the following is his report of it:

"That portion of the kidney to which the tumor was attached was not sent to me, nor did I receive any of the fluid from the main cyst. The remainder of the kidney, and the greater part of the tumor, however, came into my hands.

"The growth is partly solid and partly cystic. The solid part is said to have weighed, when removed, 4½ pounds, and the fluid 6 pounds. There is a main cyst, the size of which about equals that of a child's head. A part of the wall of this cyst has been removed, and was said to be closely adherent to the kidney. The rest of the tumor consists in greatest part of dense, white, glistening tissue, in which appear many cysts, varying in size from a pea to a hen's egg.

"In the dense stroma there are also many patches presenting a yellowish, translucent, gelatinous appearance, and composed of a wide-meshed tissue, infiltrated with serous-looking fluid. These œdematous-looking patches resemble the so-called geodes of the fibro-cystic tumor of the uterus, and from these geodes can be clearly traced the development of the cysts.

"The fluid contained in these cysts is of a yellowish or reddish-yellow color, and spontaneously coagulable. Whitish coagula were found floating in the fluid of all the cysts opened. The microscopical examination of the fluid showed the coagula to consist of finely fibrillated fibrin, and, in addition, revealed the presence of leucocytes and red blood-corpuscles in moderate numbers. (Unfortunately, I am not able to report the characters of the fluid in the main cyst.)

"The dense stroma, of which the solid part of the tumor is mainly composed, consists of fibrillated connective tissue containing branched cells. The fibrillated basement substance in most places preponderates over the cells.

"In the gelatinous patches (geodes) the fibrils of connective tissue form a loosely interlacing meshwork, containing serum and numerous leucocytes, with some branching cells. The appearance is that of mucoid tissue, but no reaction for mucin could be obtained with acetic acid. In the development of the cysts, the tissue in these patches acquires a looser and looser texture, the meshes become wider and wider, the interstitial fluid increases in amount, until a cavity with smooth or slightly vigorous walls is formed.

"The walls of the cyst are not lined by epithelium, but simply by the surrounding connective tissue.

"The exterior of the tumor presents a somewhat lobulated appearance, and is apparently covered over a part of its extent by peritoneum.

"The tumor is to be regarded as a fibroma in which cysts have developed, either by mucoid metamorphosis of the fibrous tissue, or by distention of the interstices of the connective tissue by lymph."

USE OF PLASTER-OF-PARIS IN THE TREATMENT OF CLUB-FOOT.

BY P. S. CONNER, M.D.,

PROF. OF ANATOMY AND CLINICAL SURGERY, MEDICAL COLLEGE OF OHIO.

THAT the deformity of club-foot may be corrected, it is necessary (1) that the distorted parts be put in normal position, and (2), that they be kept there; and, just in proportion as any plan of treatment accomplishes these indications, it is a proper one to be employed. Every one knows that in the great majority of congenital cases it is possible, during a variable but quite considerable time after birth, by

manipulation, to bring the foot into its natural place; and, could it be sufficiently long and steadily held there by the hand of parent or nurse, rectification of the deformity would almost to a certainty result. What can be substituted for such gentle yet efficient hand-pressure? Ordinary bandages and adhesive plaster strips have been employed, and, in many cases, with advantage; but not infrequently they have been found insufficient, and the adhesive strips often very much irritate the delicate skin of the foot and leg. As a rule, club-foot apparatus are not applied until the child is a few or several years old, when the deformity has become quite well developed, and when frequently strongly contractured tendons and more or less altered joint-surfaces much complicate the case. Against all the forms of these mechanical appliances several objections lie. In the first place, oftentimes they are badly adjusted, and in the majority of instances they do not maintain the correction made when they are applied; next, making pressure generally upon only a limited number of points, their use is very apt to be followed by local irritations, with resulting ulcers or callosities; again, they are expensive, and often require much repairing, and very many club-foot patients are the children of poor parents.

Recognizing the existence of these disadvantages, I have, for several years past, been experimenting with the plaster-of-Paris, recommended long ago by Little; the youngest subject upon which it has been applied being two weeks old. The success which has attended these experiments leads me to believe that this method of treatment may, in many cases at least, be advantageously employed. The application of it is easy; an ordinary plaster roller being turned over the foot, ankle, and the lower half of the leg. In quite young patients a layer of cotton may with advantage be laid on, and the bandage put over it; in older ones the latter should be placed directly on the skin. The thickness of the covering must of course vary with the amount of deformity and existing muscular power. Before the plaster begins to set, the foot is to be brought as near its normal position as can be done without causing any decided pain, and held in place until the hardening is complete. Great care must be taken not to attempt too much at first. Preliminary tenotomy is to be made or not, according to circumstances, but is seldom required in young subjects. At each subsequent dressing more and more rectification is to be effected. Removal of the bandage will be required ordinarily in from three to six weeks, and the treatment, so far as I have been able to determine, must be continued for from six to eighteen months, and afterwards either a half boot with stiffened sides or the usual club-foot shoe worn, the former being generally sufficient to prevent any reproduction of the deformity.

Two objections have been made to this method of treatment; first, that the dressing is a heavy and clumsy one, and second, that the proper development of the foot will be prevented. If properly applied, the weight of the plaster bandage is not so great as to prevent ready use of the limb if the patient is old enough to run about; and I have yet to see a single case in which the growth of the foot has been interfered with, or in which flattening of the arch has been produced. The advantages of the method are, that it is efficient, cheap, distributes the pressure which must be made in order that the foot shall be brought round and kept in place, can be employed at a very early period, can be put in practice by any one of ordinary skill and judgment, and does not necessitate calling in the aid of the surgical instrument maker, to whom oftentimes the case is turned over with instructions to "put on a club-foot shoe," as though it was to be treated simply with leather and steel. If it be thought advisable to have the foot daily bathed and rubbed, instead of the plaster roller, the "Bavarian" dressing might be applied; but I have never used it, preferring that the pressure should be continuous for as long a period as possible, with only such intermissions as are absolutely required for the reapplication of the bandage. When the deformity is of long standing, and large callosities are present from pressure, either of a previously-worn shoe, or of the weight of the body in standing and walking, special care must be taken in applying the dressing, and rectification must be very gradually brought about; otherwise ulceration will occur, and, as a consequence, the treatment may, and probably will, have to be entirely suspended until the ulcer heals, and, as generally happens under such circumstances, whatever the method pursued, the malposition will rapidly be reproduced.

HOSPITAL NOTES.

ON THE TREATMENT OF FRACTURES OF THE UPPER EXTREMITIES, IN THE BOSTON HOSPITALS.

(*Specially reported for* THE MEDICAL NEWS.)

IN general, it may be said that plaster or other immovable dressings are almost never used in the treatment of *fresh* fractures in the Boston hospitals. Stiff bandages of either plaster, silicate of potash, starch and glue, or dextrine, are, however, applied in a large majority of cases later on in the treatment, when the union of the fragments has become somewhat firm, and the swelling has subsided. Ether is given when reducing fractures of the thigh, and in other cases where there is difficulty in overcoming the displacement of the fragments, or in making an accurate diagnosis.

Simple fractures of the humerus, in its upper third, are treated by means of a shoulder-cap, made either of wire, gutta-percha, felt, or two layers of rather coarse gauze, with plaster well rubbed into it. This is moulded to fit the shoulder, a pad is placed in the axilla, coaptation splints are applied to the inside, back, and front of the arm, and the wrist is placed in a sling.

Simple fractures of the middle third are treated by a shoulder-cap extending well down towards the elbow, coaptation splints, and a sling for the wrist. Sometimes, in addition to the above, an internal angular splint is applied to the elbow.

Simple fractures of the lower third are put up on an internal angular splint; and this splint is also used for all fractures about the elbow, whether above, through, or below the joint, except those of the olecranon.

Dr. Ingalls, of the Boston City Hospital, is of the opinion that, in many cases of fracture of the humerus near the elbow joint, the best treatment is to make traction with the arm extended, instead of being flexed around an internal angular splint; and he intends to

treat these fractures in the above manner, and to pay particular attention to the use of passive motion as early as possible.

In cases where there is shortening, which cannot be controlled by the ordinary appliances, extension by a weight attached to the lower fragment, and counter-extension by means of elastic bands attached to the upper, passed across the body and fastened to the bed, is often employed.

In fractures high up, where there is displacement forwards, the side of the thorax may be used as a splint by placing a small pad in the axilla, coaptation splints around the arm, and over these a firm, well-starched Velpeau bandage. In this manner all leverage upon the lower fragment by the movements of the forearm is avoided. Instead of the Velpeau, a many-tailed bandage, the ends of which pass round to the opposite side of the body and are there tied, may be used.

Compound fractures of the humerus.—Where the external wound is small, it is sealed with lint soaked in compound tincture of benzoin, or carbolic oil; where it is more serious, it is thoroughly washed out with a solution of carbolic acid and done up in a "Lister dressing," carbolized cotton batting dressing, "Phenyl dressing,"[1] or constant irrigation with a carbolic solution is used. The above treatment is the one used in all compound fractures, whether of the upper or lower extremity.

In cases where the external wound is but slight, splints similar to those used in simple fractures are applied at once. Where the wound is more extensive, the arm, done up in one of the dressings mentioned above, is in many cases placed in a tin tray, or one made of gauze and plaster, and packed around with oakum, or carbolic gauze; and the wound is kept as far as possible in an antiseptic condition. As soon as the condition of the wound is such as to allow of more active treatment, splints of various shapes, which will as far as possible admit of the wound being dressed without necessitating their removal, are applied.

COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

(*Clinic for Diseases of the Throat.*)

CASES OF RARE CONGENITAL DEFORMITY OF THE POSTERIOR NARES AND THROAT.

(Under the care of PROF. GEO. M. LEFFERTS.)

CASE I. *Double Septum.*—The following curious abnormality was only discovered by accident during the rhinoscopic examination of a young man æt. 25, who had applied for treatment for a chronic catarrhal pharyngo-laryngitis. The posterior edge of the *septum narium*, from its point of mergence into the parts making up the vault of the pharynx to one half way in its course from the floor of the nares, was divided vertically into two distinct halves, enclosing between them a space large enough to contain perhaps the end of a lead pencil. This space was more or less triangular in shape, its base lying above, and was lined apparently with normal mucous membrane. Its depth was not ascertained, but an anterior examination of the nasal passages disclosed nothing abnormal as to the configuration of the septum. There was no history of injury to the nose or skull. No symptoms were referable to the condition, and its presence was of course unknown to the patient.

CASE II. *Congenital Lateral Deficiencies of Velum.*—A girl, æt. 19, in attendance upon the clinic for the treatment of an ordinary catarrhal affection of the throat, has, through the *velum palati*, to either side and just above the point where the anterior pillar of the fauces loses itself in the broad expanse of the soft palate, a symmetrical, ovoid perforation the size of a small pea. The edges of these openings are smooth and rounded, are free from all cicatricial tissue, as are the parts in the immediate neighborhood, and are soft and lax. The patient has never had ulcerated sore throat nor indeed any severe affection of the parts, and remembers that the openings here described have always existed without change, a statement that is corroborated by her mother. The condition gives rise to no inconvenience, and demands no surgical interference.

Remarks.—The rarity of such instances as are here reported renders them of interest. They are, however, to be regarded as curiosities, and as of little practical import, except in so far as the recognition of their possible occurrence will guard against diagnostic errors. I know of but one case recorded in literature similar to the first described (Schrœtter, *Laryngologische Mittheilungen*, Wien, 1875), and of none similar to the second. Langer, in a series of investigations of embryological sphenoid bones, suggested by the case just alluded to, found that a canal exists between the two halves of the sphenoid during the first months of fœtal life, and rightly, I believe, classes such cases as the one that I have described as being due to an arrested development.

The same explanation probably holds good for the second case, but is not so readily demonstrable; indeed, the very seat of the lesion, away from the median line, militates to a certain extent against the hypothesis. No other, however, suggests itself for this particular and peculiar deformity occurring in this locality.

[1] See Boston Med. and Surg. Journal, July 14, 1881. Antiseptic Surgery, Dr. H. H. A. Beach.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

Service of D. HAYES AGNEW, M.D.

A POSSIBLE COMPLICATION IN LITHOTOMY.

(Reported by J. WILLIAM WHITE, M.D.)

DURING a recent clinical lecture, Dr. Agnew, who was about to perform lithotomy, called attention to a temporary condition of the patient which necessitated delay. Etherization was complete, but the respiratory movements were hurried and excessive; the sphincters of the anus were entirely relaxed, and the anal aperture was patulous, an inch and a half or two inches in diameter, and moving in sympathy with the expansion and contraction of the thorax. In this manner it seemed to act as a valve, admitting air to the rectum, but not favoring its expulsion, so that for several minutes the lower bowel was in a state of distention. Of course, there would have been great danger of wounding it if the operation had been proceeded with under these circumstances. In a short time, however, as deeper anæsthesia was produced, the anus resumed its normal appearance, and the rectal dilatation disappeared. So far as we know, this possible complication of lithotomy has not been alluded to.

JEFFERSON MEDICAL COLLEGE HOSPITAL.

CASES OF REMOVAL OF THE BREAST FOR CARCINOMA.

(Under the care of DR. SAMUEL W. GROSS.)

IN carcinoma, Dr. S. W. Gross makes it an invariable rule to remove not only the entire breast, but its investing skin, connective tissue, and fat, the fascia of the pectoral muscle, and the axillary glands. If the muscles are involved, the nodules are unsparingly excised, and the apparently sound parts touched with the actual cautery or a strong solution of chloride of zinc. Even when the glands in the axilla are not palpable prior to operation, that cavity is always opened and thoroughly explored with the finger, since in not a few instances incipient glandular involvement is detected in this way.

In dealing with the glands, if they have served as sources of infection of the surrounding tissues, through which they are matted together and form a confused mass, the contents of the axilla are removed by a formal dissection, care being taken to pass a catgut ligature around the vessels before they are divided. When, on the other hand, the disease is limited to the glands, and the carcinomatous structure is contained within their capsules, they are simply enucleated by the finger, or a pair of scissors curved on the flat. When there is much oozing from the pectoral muscle, the hæmorrhage is readily restrained by the application of napkins wrung out of hot water. The entire wound is then washed with a two per cent. solution of carbolic acid; a drainage tube is inserted into the axilla; the wound is closed as accurately as possible by sutures inserted some distance from its edges; and lint imbued with carbolized cosmoline, confined by a broad flannel roller, finishes the dressing. Conducted in this way, Dr. Gross believes that a certain proportion of cures follow the operation; an assumption which is verified by Case III. The scar left by such thorough removal of the tissues is remarkably small. In Cases II. and III., it was not over an inch in width, and it was soft and pliable. In Case I., the large wound was reduced, by the insertion of sutures and the application of adhesive strips, to an area one-third less than that of the palm of the hand.

CASE I. *Scirrhus of the Breast, Skin, and Axillary Glands—Thorough Removal of the Affected Structures.*—A robust, healthy-looking woman, forty-two years of age, the mother of nine children, first noticed, twenty-four months ago, a small lump above the right nipple. The latter began to retract at the expiration of one year; and at the same time nodules appeared in the skin, the largest of which, an inch in diameter, was situated near the mammilla, and the others, to the number of seven, occupied the upper and sternal borders of the heart. At the expiration of sixteen months, she noticed lumps in the axilla, which now formed a dense elongated mass in that cavity. There were no antecedents, nor was there pain in the upper end of the humerus on pressure. The entire organ, with its investments, and the pectoral fascia, was removed by a circular incision; the axilla was opened by a cut, which extended from the upper and outer side of the pectoral incision, and the diseased mass of glands, fat, and connective tissue were dissected out, seven vessels requiring ligation. The temperature rose to 100⅘°, and the pulse to 120, on the following morning; after which they gradually fell, and became normal on the morning of the fourth day. At the expiration of two weeks, when the granulations had reached the level of the surrounding skin, twelve epidermic grafts were inserted, and, when we saw the patient two days later, ten had taken.

CASE II. *Recurrent Scirrhus in the Axilla—Thorough Removal.*—A married, healthy woman, fifty years of age, was subjected to amputation of the entire breast (which was ulcerated, but mobile on the chest, and in the investing skin of which, towards its sternal border, there was a small carcinomatous nodule), and excision of infected axillary glands, on the 23d of October, 1880. On the 16th of November, 1881, the cicatrice was soft, pliable, and not over an inch in width; but a gland on the side of the chest, at the termination of the cicatrice, and a mass of glands in the axilla, were readily detected, of the existence of which she had no knowledge. Dr. Gross made a clean dissection of the axilla, removing a mass of glands and infiltrated tissues, along with an enlarged gland beneath the lower border of the pectoralis major muscle, a few of the fibres of which were also excised. Six vessels, including the subscapular artery and vein, were tied.

CASE III. *Scirrhus of the Breast and Axillary Glands—Thorough Removal—Permanent Recovery.*—On the 4th of September, 1878, Dr. Gross amputated the entire breast, and cleaned out the axilla of a single woman, forty-eight years of age. The tumor was of twelve months' duration, and as large as a small lemon; the nipple was retracted, and the skin was adherent. At the end of six weeks the entire wound had closed, and the woman has since performed her duties as a laundry maid with perfect comfort. The cicatrice is soft and mobile, of a natural tint, and hardly an inch in width, and there is not the least sign of recurrence in the axilla. Thirty-eight months and a half have now elapsed since the operation, and Dr. Gross has every reason for assuming that the result is final.

MEDICAL PROGRESS.

TREATMENT OF EPITHELIOMA OF THE NECK OF THE UTERUS.—Dr. CHÉRON, referring to the Italian experiences with this practice, employs the nitrate of lead in ulcerating epithelioma of the uterine neck. After cleansing the surface with charpie moistened with glycerin, or washing out the canal with perchloride of iron solution if there is much oozing of blood, he applies to the ulcerated surface with an insufflator the following powder: Plumbi nitrat. purif. ʒi. Lycopodii ʒij. The powder is kept in position by a suitable tampon. Under the action of this preparation the suppuration diminishes sensibly and the odor disappears. The hæmorrhages are also suppressed. After twelve or fifteen of these applications, the engorgement of the cul-dè-sac diminishes, and the general health is greatly improved.—*Journal de Thérapeutique*, October 10, 1881.

A NEW THEORY OF URÆMIA.—MM. FELTZ and RITTER have recently announced that the real cause of uræmia is a change in the proportional quantity of potassa in the blood. The amount of the potassic salts in the blood, as in the urine, varies with the quantity and quality of the food. A special alimentation, in which the sodic salts preponderate, long continued, has the same effect on the quantity of the salts of potassium, as a poor and insufficient diet. The quantity of the salts of potassium contained in the blood influences in a certain degree the amount of urea necessary to produce grave or fatal results. Suppression of the renal function by the simultaneous ligation of the ureters determines in the blood and in the serum a sensible increase in the potassic salts except the supplementary gastro-intestinal excretion. In this respect the alkaline salts obey the same law as urea and extractive matters, which increase in the blood under the same conditions. The most serious results of experimental uræmia are not connected with the retention and accumulation in the blood of the urea or extractive matters of the urine, but, on the contrary, are produced by the injection of fresh, normal urine, or of equivalent solutions of the salts of potassium in distilled water. We think it must be admitted that the real agents of the toxæmia are the salts of potassium which accumulate in the blood.—*Bull. Gén. de Thérap.*, September 15, 1881.

THE TREATMENT OF TYPHOID FEVER BY ANTIZYMOTICS.—Dr. PECHOLIER, *Agrégé* of the Montpelier Faculty of Medicine, writes to the *Bulletin Gén. de Thérapeutique*, for September 15, 1881, on this topic. It is well known, he says, that creosote or phenic acid is absolutely opposed to all fermentation. Recognizing that typhoid fever is produced by a special ferment, he concluded to attempt the arrest of the pathological fermentation by the administration of antizymotic remedies, so long ago as 1868, and he therefore claims priority in

this mode of practice. MM. Desplats, Hallopeau, and Raymond, have ascertained by the graphic method the antipyretic action of the antizymotics. The special fermentation, which is the initial phenomenon of typhoid, is accompanied by the production of heat, as is the case in all kinds of fermentation. It is by suspending or moderating this fermentation, that creosote or phenic acid lowers the thermic curve. Large doses, he holds, are not necessary, and there is the danger in their use of exciting gastro-enteric irritation. When he finds prolonged administration necessary, he gives the remedy by rectal injection—10 drops in 150 grammes of water (about 5 ounces). The injections have, he thinks, a useful detergent and disinfecting action. This practice is not incompatible with the methods of hydrotherapy, but reserving cold baths for special cases, he generally employs tepid baths of 82½° to 91½° F., but he does not the less continue his practice of combating typhoid fermentation by the measure above mentioned. Proceeding in this way he has obtained remarkable results, and if not able to declare with M. Glénard, that in his hands no deaths occur from typhoid, he is happy in being able to affirm that deaths occur but rarely.

SUCCESSFUL EXTIRPATION OF THE SPLEEN.—Dr. FERNANDO FRANZOLINI, attached to the Civil Hospital of Udine, and well known in Italy as a bold and careful operator in cases of abdominal surgery, has the honor of being the first in his own country to remove with success a diseased spleen. The operation has been performed now some 25 times in Europe, of which 3 or 4 cases were in Italy, with the result of saving in all 6 patients. Dr. Franzolini operated in the hospital named, on September 20, ult., upon a young woman of 22 years of age, affected with "simple, true, idiopathic hypertrophy" of the organ, and a month later she was reported as having recovered. The tumor extracted was 9½ inches long by 6¼ inches wide, and weighed over 3 pounds. The abdominal incision extended from 4¾ inches above the umbilicus to 4 inches below it, and the operation lasted 1 hour and 25 minutes. The method of Lister was fully carried out. All of the ligatures were dropped into the abdominal cavity, and the wound was closed without drainage. No blood escaped into the abdomen.

Dr. Franzolini was also the first in Italy to perform Battey's operation with success. This was on August 14, 1876, and to remove, with like result, the uterus and ovaries in a non-pregnant woman. His only Porro case was lost, as the woman was *in extremis* when he operated upon her.

LEUCOCYTHÆMIA.—Dr. J. E. GRAHAM, Lecturer on Clinical Medicine in Toronto School of Medicine, gives the following as his conclusions from the study of a case of leucocythæmia:

1. That the essential features of leucocythæmia are the lymphoid growths, and the leucocytes found in the blood derived from them. 2. That the existence of similar growths is the essential feature of Hodgkin's disease, but in it the cells, for some reason which I cannot explain, do not find the way into the circulation. 3. That in both diseases the presence of these growths or deposits interferes with the manufacture of the red corpuscles producing anæmia. 4. That these growths bear a strong resemblance to those of a malignant character, especially sarcomata. 5. That progressive pernicious anæmia may arise as a consequence of leucocythæmia or Hodgkin's disease in the same way as it sometimes results from pregnancy, or any other condition which interferes with the proper elaboration of the blood.—*Canadian Journal of Medical Science*, November, 1881.

REMOVAL OF UTERINE POLYPI.—At a recent session of the Paris Academy of Medicine, the procedure adopted by several surgeons for the removal of uterine polypi was brought out in the course of the discussion. Léon Labbé uses the galvano-cautery; Verneuil, the wire écraseur; Gosselin, scissors; and Trélat contends that each plan has its excellences, and may be employed according to circumsantces.

DIABETES INSIPIDUS TREATED BY ELECTRICITY.—Mr. C. P. B. CLUBBE reports the case of a woman, aged thirty-five, who was suffering from diuresis, and in whom iron, nux vomica, valerian, and bromide of potassium had been used without any marked effect. Faradism over the region of the kidneys was then employed every day for about twenty minutes for twenty weeks. There was very decided improvement up to the seventh week, when the daily average of fluid passed varied very slightly; improvement, however, being constant. Treatment was then stopped, and six months afterwards she was no worse, though still passing from six to seven pints of urine daily.—*Lancet*, October 29, 1881.

PROF. TOMMASI-CRUDELI ON THE MALARIA OF ROME.—In 1879 KLEBS and TOMMASI described the malaria microbe—*bacillus malariæ*. The history of this parasite is not complete from the point of view of its pathogenetic and morphologic properties, but enough is known of its biological status to throw great light, it is probable, on certain important questions of public hygiene.

The bacillus malariæ is an organism requiring air. The germs or sporules are often encountered in soils of very different composition, and frequently poor inorganic substances. Malarial soils are often found in localities which are not, and have never been marshy. In Italy malaria-breeding soils are found in some lowlands and on some mountains. On the other hand, all marshes are not malaria-producing. In all malarial localities the multiplication of the bacillus malariæ takes place under three conditions: a temperature of about 68° F.; moderate but permanent humidity; and the direct action of the oxygen of the air on all parts of the mass. If one of these three conditions is absent, the multiplication of the bacillus and the development of the sporules are arrested. Hence it is that the most pestilential marshes do not engender malaria—although the temperature may be very high—when they are wholly covered with water, and no air can penetrate to the malaria-breeding soil. In the mud of malaria marshes the malaric ferment is always associated with a septic ferment. This association may be considered fortuitous. It is easy, in fact, to terminate all the phenomena of putrefaction in the palustral mud, and also to remove from them the power to produce septic infection, by means of a proceeding which augments the production of the malarial ferment to that degree that it becomes capable of producing pernicious fevers.—*Journal de Thérapeutique*, October 25, 1881.

PURPURA HÆMORRHAGICA IN ITS RELATIONS TO MENSTRUATION AND PREGNANCY.—Dr. ALBERT PUECH gives the following conclusions as expressing the results of his study of purpura:

1. Purpura hæmorrhagica occurs more frequently in the female than in the male.

2. It exerts a marked influence on the uterus whether in the empty or gravid state.

3. In the empty state, its influence can be manifested in three ways: *a*. It can suppress the menstrual discharge, and substitute it vicariously by its periodic occurrence. *b*. It may simply exaggerate the menstrual flow (*menorrhagia*). *c*. It may itself cause a hæmorrhage from the uterus (*metrorrhagia*).

4. During pregnancy, purpura has a tendency to cause abortion or premature labor.

5. Prognosis should in all cases be guarded, but in a general way it may be said that purpura is more serious in the woman than in man, and in pregnancy than when the uterus is empty.

6. Metrorrhagias have a graver prognosis than menorrhagias.—*Annale de Gynécologie*, October, 1881.

A CASE OF MANIA AFTER SCARLATINA.—Cases of psychical disturbance as a consequence of scarlatina are extremely rare, two cases, as far as we know, being all that have been as yet reported. The case reported by Dr. J. ROBUSKE, in which a cure was ultimately affected, is therefore deserving of mention. The patient, a man aged twenty-one years, after a mild attack of scarlatina, in which there was delirium, was affected with hallucinations and subjective sensations; he could not be kept in bed, moving restlessly up and down his room, and tearing his clothes and bed coverings. This condition lasted about a week, when, under the action of chloral and morphia, he gradually improved; was willing to remain in bed and take nourishment. A decided desquamation of cuticle occurred at about this time, accompanied by violent neuralgia of the lower extremities; after about two weeks illness in all, he recovered completely.—*Deutsche Med. Woch.*, Oct. 8, 1881.

CALABAR BEAN IN TETANUS.—Mr. J. THOMPSON HAYNE reports three cases of traumatic tetanus treated with hypodermic injections of one-sixth of a grain of extract of physostigma; of his cases two recovered and one died.—*British Med. Journ.*, Oct. 29, 1881.

A NEW SYMPTOM OF DISTURBANCE OF THE BILIARY FUNCTION.—From a long and valuable article on this subject, MM. LÉPINE and GUÉRIN draw the following conclusions: 1. It is possible in an animal, either by establishing a biliary fistula in the peritoneal cavity, or by keeping the biliary passages for several hours under pressure, to produce the passage into the urine of an extraordinary quantity of incompletely oxidized sulphur, additional proof of its biliary origin being found in the slightly oxidizable properties of taurine and its derivatives.

2. In man, above all, when the excretion of bile is obstructed, the same anomaly may be found in the urine, though in a less degree. In general, it is transient, so that in a few days the opposite extreme may occur, or the normal condition be regained. In every case, the essential characteristic of this condition is not the increase alone of incompletely oxidized sulphur, but the increase in the *proportion* of difficultly oxidizable sulphur.—*Révue de Medicine*, Nov. 10, 1881.

COLLYRIUM FOR DISSOLVING METALLIC FOREIGN BODIES FROM THE CORNEA.—Dr. RODRIGUEZ reports the following case (*Revista de Scienctas Medicas*, 25 Oct., 1881).—A blacksmith, aged eighteen years, while forging a piece of iron, received in his left eye a small splinter of the metal, which remained there incrusted, in spite of all attempts to remove it. The following wash was then employed: Rose water, 90 grm.; Iodine, .05 grm.; Iodide of Potass., .05 grm; the result was extremely satisfactory. The particle of metal was transformed into a soluble iodide of iron, and all traces of the foreign body had disappeared. The cornea regained its normal condition, and vision remained unaffected. —*Journ. de Méd. de Paris*, Nov. 12, 1881.

THE TREATMENT OF SOFT CHANCRES AND CHANCROUS BUBOES BY SALICYLIC ACID.—Without being an infallible specific which will take the place of all the other agents employed in these cases, salicylic acid is capable of rendering the most important service. It has the merit that it is without odor, gives but little pain, is soluble in alcohol and glycerin, and does not soil the linen. As a vehicle, glycerin presents many advantages: it does not evaporate, and it maintains on the surface of the ulcers a permanent coating which prevents the access of air. The following formula is employed by Dr. Autier: Acid Salicylic, 2 grammes. Glycerin, 100 grammes.—*Thèsé de Paris—Dr. Autier*, *Journal de Thérapeutique*, October 25, 1881.

SUCCESSFUL PORRO OPERATION.—The seventh Porro operation at the Santa Caterina Hospital of Milan, and the fifth success in order, was performed by Dr. Paolo Negri, Second Assistant of the Royal School of Obstetrics. The case was one of malacosteon, with a badly deformed pelvis; and the operation was performed on October 9th inst. Two weeks later the woman was regarded as safe for recovery. This gives Italy 34 Porro operations and 13 recoveries. The 7 cases in Santa Catérina Hospital resulted as follows:

	Deformed by	Operator.	Woman.	Child.
1.	Rickets.	Prof. Chiara.	Died.	Alive.
2.	"	" "	"	"
3.	Malacosteon.	" "	Recovered.	"
4.	Rickets.	" Mangiagalli.	"	"
5.	"	" Chiara.	"	"
6.	"	" Mangiagalli.	"	"
7.	Malacosteon.	" Negri.	"	"

A NEW SOLVENT FOR DIPHTHERITIC MEMBRANE.—Dr. W. HALE WHITE recommends spraying the throat, in cases of diphtheria or the trachea after tracheotomy, with an acid glycerin of pepsin, warmed up to 110° F. The fragments of membrane coughed up in the case in which it was used, he reports, were very soft and gelatinous as compared with ordinary diphtheritic membranes. He thinks, however, that the chief value of the pepsin is not to digest the large pieces of membrane, but to mix with the secretion in the smaller bronchi and prevent the formation of membrane there. The child died some time after, how long is not stated, from broncho-pneumonia; and it is reported that there was no evidence to show that the pepsin had had any evil effect on the air-tubes.—*Lancet*, October 22, 1881.

POISONING WITH CHLORATE OF POTASSIUM.—From a number of experiments made by Messrs. BROUARDEL and SHOTE they conclude that: *First.* Numerous examples leave no doubt as to the fact that large doses of chlorate of potassium (35–40 grammes for an adult, eight or ten times less for a child of two or three years) can produce death. *Second.* The intervals during which the successive doses are administered exert a great influence on the development and gravity of the toxic effects. If the doses are separated by long intervals, rapidity of elimination diminishes the danger. When they rapidly succeed one another, the danger is much greater.—*Jour. de Méd. de Paris*, October 1, 1881.

TREATMENT OF SPERMATORRHŒA.—Dr. NOWATSCHEK reports in *Schmidt's Jahrbücker*, January, 1881, a case of spermatorrhœa consequent on typhoid fever, the diagnosis resting on the presence of spermatozoa in the fluid which was constantly oozing from the urethra. Iron, quinia, and cold applications to the genitals were tried in succession with some success, but a cure was not accomplished. Lupulin, camphor, and bromide of potassium were without effect. Atropia was then employed, and the patient was completely cured in five days. The author cites a second case where he was equally successful with the hypodermic injection in the perineum of a one per-cent. solution of atropia.—*Jour. de Méd. de Paris*, October 8, 1881.

ARSENIC INTERNALLY AND SUBCUTANEOUSLY IN THE TREATMENT OF LYMPHOMA.—A woman of sixty-five had difficulty in swallowing, and breathing and suffered from general feebleness, deafness, etc. Her condition was cachectic. Examination revealed a tumor in the posterior pharynx filling up the nasal and pharyngeal cavities; the submaxillary and axillary glands were also swollen and hard. These growths were made to disappear, and the woman was regarded as cured in five months. This remarkable result was accomplished by the combined internal and parenchymatous administration of Fowler's solution. The arsenic was given in large doses, mixed with acetated tincture of iron, from 8 up to 25 drops three times a day. In this way 28 grammes were consumed in the course of the treatment. The injections consisted of equal parts of Fowler's solution and distilled water, of which there was injected from one to three-tenths of the capacity of a Pravaz syringe (about 3 to 9 minims). There was but little reaction of the general organism, but a marked acceleration of the pulse. Locally, the tumors increased considerably in size with the first injections, but after the second week rapidly declined.—*Berl. Klin. Wochen.* 1880, No. 52.

CZERNY has employed the method of Billroth, above described, in the cure of glandular lymphomata. In six months he obtained a complete cure of a case, in which the patient had taken 746 drops and had received 76 injections of 10 drops each.—*Wien med. Wochen.* 1881, No. 2.

TREATMENT OF SUBACUTE AND CHRONIC ARTICULAR AFFECTIONS BY OAKUM.—Dr. CONSTANTIN PAUL has employed with success, at Lariboisière, the substance called *oakum*. The affected articulation is completely enveloped to a thickness of 1 or 2 centimetres. Treated thus, a case of *arthritis deformans* has been much relieved in some weeks. It has produced the best effects in *bronchitis*, in place of Burgundy Pitch plaster.—*Bulletin Gén. de Thérapeutique*, Sept. 15, 1881.

THE METHODICAL EXERCISE OF RESPIRATION IN RELATION TO THE CONFORMATION OF THE CHEST AND TO THE GENERAL HEALTH, is the title of a paper by Dr. DALLY, in which, after discussing various physiological questions concerning the respiratory organs, he proposes certain methodical movements for exercising the thorax.

1. The first or normal, is the vertical position, perfectly erect, as if standing against a wall, the arms hanging by the side. This position should be taken and kept for ten minutes at a time, a number of times a day.

2. The two arms and the hands are extended horizontally forwards, the palms of the hands facing. The hands are separated slowly, whilst the chest is inclined forward. Remain in this position thirty seconds, and inspire deeply by the nose. Return to the initial position, and expire. Execute this movement six times.

3. The arms hang by the body; raise them upwards —the fingers well extended—above the head, the palms looking forward. Take a deep inspiration. Let fall the arms alongside the body, palms open, and expire slowly.

4. Double rotation at the side. The subject being in the normal position (first), executes as large as possible, the arms well extended, double rotation laterally, and inclining the trunk forward each time that the arms are thrown behind, and never projecting the belly forward. This movement is executed entirely by the scapulo-humeral articulation.

5. The arms are crossed horizontally, the palms of the hands looking backward. Flexion lateral, alternately, of the trunk. The flexion will be then regular, transverse, the abdomen drawn in, the legs extended apart, the pelvis fixed. The limit of the flexion is the vertical position of the elevated arm. Mild inspiration during the flexion; at its termination expiration. Execute these movements from six to eight times.

These exercises, if faithfully carried out, improve the shape and capacity of the thorax and check the development of incipient phthisis. According to Dr. Dally, dyspnœa, polysarca, and arthritic conditions are removed or sensibly ameliorated. Venous stases, varicose dilatations, and infarctions are, after some weeks of such movements, much improved when the circumstances are favorable. The great obstacles to this hygienic medication in our civilization are, the habitual idleness and laziness, and the indisposition to devote time and *interest* to such means, is the conclusion of Dr. Dally.—*Bull. Gén. de Thérap.*, Sept. 30, 1881.

INJECTIONS OF BROMIDE OF POTASSIUM IN GONORRHŒA.—In eighteen patients under observation there was noted in fifteen a rapid diminution or complete suppression of the erections. The injections are not very painful. They are used five times a day, the last injection being practised just before retiring. They should be retained in the canal one or two minutes.

The following is the formula: Water, 150 grammes. Glycerin, 10 grammes. Bromide of Potassium, 6 grammes. Laudanum, 2 grammes.—*Journal de Thérapeutique*, October, 1881.

CASE OF GALVANO-PUNCTURE IN AORTIC ANEURISM.—Mr. RICHARD CANNON reports the case of an aortic aneurism which had almost reached the point of rupture, the skin being reddened and very thin over the tumor, which was cured by the insertion of two needles connected with twelve Stöhrer cells. It is stated that when the needles were withdrawn no current was to be detected, so the favorable results may with equal probability be attributed to the mere presence of the needles or to the electrolytic action. The needles remained in the tumor only twenty minutes; at the end of ten days the tumor, which had only been the size of a walnut, had flattened down to the chest walls, pulsation and redness had disappeared, and there was no pain or cough. Iodide of potassium was administered internally throughout the treatment—*Lancet*, October 22, 1881.

GENITAL REFLEX.—Dr. E. W. Saunders reports, in the *Alienist and Neurologist* for October, 1881, four cases of paroxysms of abdominal pain associated with adherent prepuce. In each case a cure followed circumcision.

SENILE OSTEOMALACIA.—From a long paper on this subject Dr. EMILE DEMARGE draws the following conclusions:

1. Osteomalacia can develop in old people as in adults.

2. We can admit clinically the existence of a form of osteomalacia localized in the vertebral column, the thorax, and the pelvis, and, although this form is more frequent in the aged, it can also develop in adults.

3. So-called senile osteomalacia is completely distinct from senile osteoporosis, and has the same lesions as true osteomalacia occurring in adults, from which it differs simply in the age of the subject in which it develops.—*Revue de Medicine*, September 10, 1881.

HÆMOSTATIC PILLS.—Dr. Huchan prescribes the following formula for hemorrhages of different kinds, as metrorrhagia, epistaxis, hæmoptysis, etc.

℞ Ergotin, Quiniæ Sulph. āā ʒss Digitalis, Ext. Hyoscyami āā gr. v. M. ft. pil. no. x. One every 2, 3 or 4 hours.—*Journal de Thérapeutique*, 10 November, 1881.

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VOLUME FORTY.

IN entering upon the fortieth year of its publication, and prompted by the desire of more fully meeting the requirements of the medical literature of to-day, and of furnishing the profession with a medium of more frequent intercommunication, *The Medical News* begins its weekly issue under most encouraging circumstances, and with the cordial commendation of a very large number of the foremost and ablest workers in the profession in all parts of the country, who have also assured its high standard of excellence by specifically promising to enrich its pages by their contributions.

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LOCAL TREATMENT OF LUNG CAVITIES.

IN the number of the *American Journal of the Medical Sciences* for October, 1881, we find a notable paper by Drs. Fenger and Hollister, of Chicago, on the "Opening and Drainage of Cavities in the Lungs." Our attention is thus invited to an extremely interesting, if not altogether new, practice. During the present century there have been numerous attempts to reach, by more direct means, the cavities excavated by tuberculous ulcerations, not to

speak of pleural effusions. The subject has been revived anew, and a more practical direction given to the operative procedures, by Professor Mosler, of Greifswald. On the 23d of September, 1873, Professor Mosler read a paper before the Society of Naturalists and Physicians, assembled at Wiesbaden, which subsequently appeared in the *Berliner Klinische Wochenschrift* for October 27, 1873, under the title—*Ueber lokale Behandlung von Lungenkavernen.* Mosler's scheme included the opening and drainage of pulmonary cavities by suitable drainage-tubes, and the application to the walls of the cavities of appropriate topical agents.

Prof. William Pepper, of Philadelphia, was engaged in a similar plan of treating lung cavities, at or about the same time, his preliminary publication appearing in *The Philadelphia Medical Times* for March 14, 1874.[1] Pepper's paper was "On the Local Treatment of Pulmonary Cavities by Injections through the Chest Wall."

Very recently drainage of the pericardium has been successfully carried on by Rosenstein, of Leyden. It is true, paracentesis of the pericardium has been frequently performed, and but a few months ago a very meritorious treatise on this topic appeared from the pen of Dr. J. B. Roberts, of Philadelphia. Rosenstein's case of drainage is, however, novel; for although puncture of the sac and fistulous openings externally are comparatively common, no one has before this deliberately opened the pericardium and inserted drainage-tubes to secure prompt removal of purulent fluid. The success of this case justifies the belief that the principles of treatment now established for empyema are equally applicable to the suppurating pericardium. It has been clearly established that in empyema, the main point is to secure a ready and complete evacuation of the pus; if necessary, exsecting a rib for that purpose. Can the same methods be applied to suppurating cavities of the lungs? To render the local conditions the same, it is necessary that the cavity be single, and that complete adhesions with the walls of the thorax exist. Let us see how far this declaration is sustained by the facts before us.

Of the six cases (five from various sources, and one their own) narrated by Drs. Fenger and Hollister, five proved fatal and one was cured. The fatal cases were examples of pulmonary disease, either inflammatory or tubercular; the successful case was one of echinococcus of the lungs. Davaine (*Traité des Entozoaires*, etc., Deux, Éd., Paris, 1877,) reports two cases of echinococcus of the lungs, in which operative procedures were successful. So long ago as January, 1812, Fréteau opened a cavity (*Opération de l'empyeme*) and discharged 500 hydatids, the rest being expectorated. In 1855, Dr. Vigla made an exploratory puncture with a trocar, in a suspected case of this kind, and injected into the hydatid cavity about 8 ounces (250 grammes) of a compound solution of iodine. (*Arch. Gen. de Médecine*, 5e Serie, tome vi., p. 282.) This case proved entirely successful.

Can the results of experience in the treatment of echinococcus cysts of the lungs be applied to phthisical cavities? We think not, and for the following reasons:

An echinococcus cyst is a purely local lesion, and the tissue of the lungs beyond the seat of deposit is healthy. The presence of an echinococcus cyst in the lungs does not involve any necessary change in the structure or function of the other organs of the body. When entirely and successfully removed, the local disturbance caused by their presence subsides, and the *status in quo* is restored.

In the case of pulmonary cavities caused by the usual conditions producing them, it is extremely rare to find a single cavity without adjacent lesions. Besides the more or less extensive pulmonary disease, complications exist in various organs which exercise a marked influence over the fortunes of the case. It is certainly true that when a cavity exists suitable for the treatment by drainage, more or less extensive caseous and tubercular deposits, dilated bronchi, interstitial pneumonia, etc., coexist. The successful drainage of a cavity, under such circumstances, can effect but a temporary alleviation of the symptoms.

Before the drainage of a cavity can be attempted, the exact position of it must be ascertained. It may be affirmed in the most positive manner that no considerable depth of healthy pulmonary tissue can be with propriety penetrated. There must be complete adhesion between the pulmonary and costal pleura at the site of the cavity. The cases conforming to these requirements are examples of advanced disease in which extensive excavations have formed in the upper or middle lobe, the anterior boundary being composed of the pleura, much thickened by organized exudations. It is difficult to conceive of any advantage to be derived from drainage of such a cavity, if, as is usual, extensive lesions coexist, and if the cavity has free communication with a bronchus. On the other hand, if the cavity occupy the major part of the diseased area, and is not satisfactorily drained, the general condition being fairly good, certainly results may be achieved by drainage sufficient to justify the procedure.

The questions concerned in dealing with hydatid cavities in the lungs are, as has been stated, very different. Without entering too much into detail, it will suffice to say that there are two modes of dealing with them, determined by the local conditions.

[1] Dr. Pepper's detailed publication appeared in the *American Journal of the Medical Sciences* for October, 1874.

When there is a solitary echinococcus cyst, which has merely displaced the pulmonary tissue without exciting a limiting inflammation, as in the case of Dr. Vigla, before mentioned, it suffices to inject some iodine solution, which causes the death of the parasite, after which it undergoes a fatty metamorphosis and disappears. If, on the other hand, the conditions are as in the case of Drs. Fenger and Hollister, and in the case of Dr. Fréteau—that is, a limiting inflammation, suppuration, and vast numbers of daughter and granddaughter vesicles — the proper practice consists in the evacuation of the cavity, in thorough drainage, and washing out with carbolized water, etc.

The injection of pulmonary cavities is a more generally available expedient. Although no distinctly curative results have been thus far obtained, there is promise in the method. The remedy thus employed has been iodine in some form. It is not essential to the success of this expedient that the cavity injected be situated superficially, or fixed by adhesions to the thoracic wall. If the diagnosis be accurate, the cavity can be readily reached by a suitable needle, even although somewhat deeply placed. This method may, in the future, be utilized for a different purpose. It may be possible to remove extensive caseous or tubercular deposits, by injecting into them medicaments which will exert a solvent action on the morbid materials, leaving the proper anatomical elements unharmed.

DRAINAGE OF THE WHITE HOUSE.

AN examination of the sanitary condition of the Executive Mansion at Washington, with especial reference to the plumbing and drainage, was made necessary by the repeated complaints of its insalubrity, to which unusual prominence has been given by events occurring within the past few months. This investigation has been made by Mr. George E. Waring, Jr., who transmitted to Col. Rockwell, in charge of public buildings and grounds, a preliminary report containing the results of his observations. It is gratifying to learn that the defects were less serious than general rumor would lead us to expect. He found the quality of the plumbing reasonably good, but the system of drainage antiquated and defective, and in part radically wrong. This is what might have been expected from alterations and additions made from time to time by different persons, in lieu of a radical reconstruction in accordance with our present knowledge of the necessary sanitary requirements.

Among the defects discovered may be mentioned, the want of proper ventilation of the soil-pipes, in one or more cases its entire absence; an arrangement of the tank for supplying a considerable portion of the house with water in such a manner as to render it subject to contamination from the main soil-pipe and from other sources; want of ventilation of two of the water-closet compartments, and the use, in one case, of the pan closet, which is now generally condemned as one of the worst of that class of sanitary appliances.

The authorities have doubtless been familiar with these faults, and their recommendations, if reported upon, have shared the fate which is inevitable when the necessary funds to defray the expense of reconstruction are withheld. It is humiliating that a great national calamity should be required as the occasion of which advantage must needs be taken to compel a thorough overhauling of the drainage arrangements of the White House, which should not, under any circumstances, have been permitted to remain in so unsatisfactory and neglected a condition. We are informed that the temporary modifications suggested by the report have been carried into effect, and that safety is now ensured.

When Col. Waring makes his final report, it is to be hoped that the recommendations for reconstructing the sanitary arrangements of the Executive Mansion in accordance with the requirements of the best practice of sanitary science will at once receive proper consideration, and that Congress will promptly make the necessary appropriation, so that in the future we shall hear no more about the insalubrity of the White House, from this cause, at least.

ONE SYMPTOM TREATMENT OF LOCOMOTOR ATAXIA.

THE hygienic treatment of the ataxia of posterior spinal sclerosis, oscillates between absolute rest and active exercise. Now comes Dr. Mortimer Granville with an expedient, which is opposed to the "rest cure," and which he says in less than three months, if his results are trustworthy, not only will the symptom which was regarded as conclusively indicating the existence of an incurable disease, be eliminated from the case, but other symptoms will disappear with it, and the general state of the patient be sensibly improved. We give the plan in his own words (*The Practitioner*, November, 1881, p. 336.)

"The patient is directed to stand with his eyes closed in his bath, after pouring a small can of cold water down the spine, and to persevere in the attempt to do this *steadily* for, at first a quarter of an hour, and as his state improves, for half an hour every morning. He is to be furnished with a chair or rail at hand, to which he can cling in case of need; but instructed to avoid using it except in actual danger of falling. When he commences the daily exercise, he will probably for some two or three weeks make little progress, but after this he will begin to be able to stand," etc.

Dr. Granville recommends in sthenic cases the

application of a mustard plaster at night, the full length of the spine, until redness is produced, in addition to the cold douche in the morning.

"FREE TRADE IN MEDICINE."

OUR valued contemporary, *The Medical Times and Gazette* of London, in a recent issue (November 12, 1881), discusses the subject of "Medical Education and Registration in America." In this article the regulations in the various States are commented on with fairness and candor. We refer to it, however, not to discuss the subject of medical education, *per se*, but whether this were better left to the medical profession and its legitimate institutions, or be made the subject of political and civic regulation. As our contemporary states it, "the conditions under which men should be allowed to practise medicine, the amount and kind of knowledge which they should be obliged to show, the way in which their possession of that knowledge can best be tested, the length of the preliminary training which they ought to be required to undergo, the extent to which the details of that training should be regulated by compulsory rules or left to individual option, these are questions upon which there are wide differences of opinion in this country."

In England and on the Continent of Europe, the system of "compulsory rules," of entire governmental control, obtains; in this country, there is, as our contemporary well expresses it, "free trade in medicine," and "the provision of competent medical advisers is left, so far as the central authority is concerned, to the unhampered operation of the law of supply and demand." Which is the better system? In England, it appears, there are wide differences of opinion on this question. They are not altogether satisfied that their plan is the better one. There is a large and influential minority who hold that the American system, notwithstanding the abuses to which it is subject, is, on the whole, the better. They observe that the profession of medicine, left to its own resources, and untrammelled by obstructive egislation, is remarkably successful in the development of its powers. In the same article from which we have quoted, we learn that "American medical literature is very voluminous, and characterized by great originality, inventive genius, industry, and practicality." Now, as all the world knows, our medical literature is the growth of this century, of, indeed, the last thirty or forty years, and it is already being reproduced in European languages. It is also well known that certain departments of our art have been created in this country, and others notably improved. Free trade in medicine seems to work well here. Ought we not continue, as heretofore, to permit the law of supply and demand to regulate our growth? We may properly correct flagrant irregularities by appropriate legislation, but ought we not refrain from such interference in our organizations and methods by authority of the government, as would hinder that free development and successful progress which we owe to our system of free trade in medicine?

THE THORACIC DUCT IN THE PRESIDENT'S CASE.

IN another column we print an excellent letter from Mr. H. A. Kelly, a medical student at the University of Pennsylvania, who, with praiseworthy zeal, has carefully dissected the thoracic duct, with a view to determining whether it could have been injured, as has been inferred, in the case of the late President Garfield. His conclusion is adverse to any such opinion. It may interest our readers to know that the ball (calibre 44) is $\frac{7}{16}$ of an inch in diameter, and that the track of the ball (supposing it to be no wider than the ball itself) passed in the middle line, within about $\frac{4}{16}$ to $\frac{5}{16}$ of an inch of the anterior surface of the wounded vertebra. Posteriorly between the track and the spinal canal a slightly greater thickness of bone intervened.

Whether the thoracic duct was injured primarily, may be doubtful. But the drawings of the specimen show that the body of the vertebra was almost wholly eroded at several points anteriorly as well as posteriorly; and it is not at all unlikely that the duct may have become involved in the later inflammatory action, and have disturbed the processes of nutrition to such an extent as to account for the subsequent rapid emaciation.

It is remarkable that the aorta escaped injury, for the ball must have almost grazed it; and it is no less remarkable that the spinal cord was not involved by the secondary erosion; and that in lifting the President so frequently the weakened spine did not give way and produce pressure on the cord.

Our correspondent has done good service in his careful investigation of the facts anatomically.

THE NATIONAL BOARD OF HEALTH.

THIS Board has just issued its annual report. We venture to say that in scarcely any of the many reports presented to Congress will there be found more important matters compressed into briefer space than in this one of three and a half quarto pages.

We have only space at this time to call attention to the excellent and valuable special scientific investigations which the Board has directed to be made by eminent scientists in various departments, such as Wood, Sternberg, Remsen, Martin, Hering, Pumpelly, Mallet, Bowditch, Stephen Smith, G. A. Smyth, and others. The subjects are national in importance, and include diphtheria, malaria, air and water currents in soils, potable water, the sanitary condition of summer resorts, arsenical papers, etc.

We hope to allude hereafter in detail to the results already obtained.

The expenditures of the Board have been—mirabile dictu—far less than the appropriation. The special sum of $100,000, set apart for use in case of an epidemic, has fortunately not been needed.

REVIEWS.

THE STUDENT'S MANUAL OF VENEREAL DISEASES. By F. R. STURGIS, M. D. 12mo, pp. 196. New York: G. P. Putnam's Sons, 1880.

This little book is a condensation of much practical information concerning the venereal diseases, arranged in the form of lectures. Beginning with the simple venereal ulcer, the author describes in accurate terms the clinical history, the customary treatment, and the sequelæ of chancroid, syphilis, and gonorrhœa, formulating and emphasizing in italicized paragraphs the general truths which underlie the received methods of diagnosis and treatment of these maladies.

We cannot better give an idea of its general plan and scope than by quoting a few of these paragraphs:

"The initial lesion of syphilis is usually indurated; when present, this is of great value; but its absence, which sometimes happens, does not change the nature of the lesion; it still remains syphilis. When the induration is absent, the diagnosis has to be made from other characteristics."

"Syphilis always begins by an initial lesion, seated at the point where the virus gained entrance, never in any other way."

"Paralysis of single muscles, or sets of muscles, are (*sic*) nine times in ten syphilitic."

"The average case of syphilis runs its course in from eighteen to twenty-four months. Under proper and careful treatment the graver forms of the disease seldom occur. After the disease has apparently run its course, and anti-syphilitic treatment has been suspended, the patients should be kept under occasional observation for another eighteen months, and if in that time no symptoms make their appearance, they may make their minds easy about the future."

Nothing could be better adapted to fix fundamental principles in the mind of the student than these and many similar axioms which might be cited if space permitted.

Teaching intended for students must necessarily be dogmatic, and it cannot be expected that in a "manual" the author should give prominence to or should even mention theories opposed to those he himself holds. He should, however, for obvious reasons, endeavor to avoid disputed questions, and to state in the clearest and most unequivocal language those propositions which have received universal acceptance.

This has, as a rule, been well done. Paragraphs similar to those above quoted, and embodying in a concise and intelligible form, much information, familiar of course to specialists, but not so well known or understood by the general practitioner or by the student, are frequent throughout the book, and are generally admirable in their terseness and comprehensiveness.

When, however, he says that "urethritis in the female is always due to some venereal affection," p. 154; doubts the existence of "vesicular and bullous [*sic*] syphilides," p. 60; asserts without qualification that "a chancroid becomes *worse* under a mercurial course, which is poison to it," p. 59; that when complicated with phimosis, "the initial lesion does not ulcerate," p. 38; and that strapping of the testicle in epididymitis "has sometimes led to atrophy of the testis, and has been pretty nearly abandoned," p. 183, he lays himself open to criticism from those who upon any or all of these points venture to disagree with him.

There is a granular urethritis of females often following parturition, and becoming chronic, a traumatic urethritis, due to local irritation, sometimes, for example, to a vulvitis caused by rude and excessive copulation, and a urethritis which may appear consecutively to affections of the bladder, in any of which a suspicion, much more a dogmatic assertion, of the existence of venereal disease would be a great injustice to the patient.

The existence of vesicular and bullous eruptions as rare forms of syphilodermata, although also questioned by other syphilographers, has been, we believe, demonstrated beyond reasonable doubt; Dr. Sturgis does not distinctly say so, but of course refers only to acquired syphilis, as, a little later, in describing infantile syphilis, he remarks, p. 122: "The body is usually covered with large bullæ."

That a simple contagious venereal ulcer—a chancroid—is not commonly benefited by a mercurial course every one will allow, but that it necessarily becomes *worse* under it, or that there is any essential antagonism between the disease and the drug cannot be admitted. How seldom it becomes necessary to interrupt a mercurial course in the treatment of syphilis to permit of the cure of an intercurrent chancroid.

When phimosis comes on as a complication of the initial lesion, there is always more or less ulceration; indeed, it is in just these cases that the sore approximates most closely in its characters to the simple venereal ulcer.

In asserting that strapping the testicle has fallen into disuse, Dr. Sturgis undoubtedly represents the teachings of Cullerier, Bumstead, and others; but the cases in which atrophy has been attributed to it are, to say the least, open to doubt; no other bad results are even claimed to have been produced; and in this city the dressing is still very commonly employed. A procedure which, practised at the proper stage of this painful affection, will give rapid, safe, and certain relief, should not be discredited or discarded on such vague grounds. No other method of treatment except that by puncture—which is not adapted to exactly the same stage, is more repugnant to the patient, and has certainly been followed by herniæ testis—will compare with it in giving comfort and enabling the patient to resume his usual avocation.

We are pleased to see that he objects to the term "mixed sore;" but regret that, while discarding this title of that purely hypothetical lesion, he immediately alludes to it by a still more objectionable name, as a "double sore," and proceeds to speak of the simultaneous inoculation of two poisons, and their subsequent course and development—a view not by any means generally accepted even by dualists, and in many respects opposed to sound pathology.

Dr. Sturgis's assertion, already quoted, that in infecting chancre the induration is sometimes absent, might have been construed into an admission that syphilis sometimes follows the sore known as a "chancroid" or "soft chancre;" but he forestalls this by substituting for the latter the term "simple venereal ulcer," which he contrasts with the "specific venereal ulcer" or initial lesion. Now if by this Dr. Sturgis means that there are two venereal ulcers, one which is specific and one which is not, we heartily agree with him; but, as he subsequently proceeds to speak of "two poisons," of "two kinds of virus," of "double infection," etc., we perceive that in dividing these sores into "simple" and "specific," he has unintentionally misrepresented himself, as, according to these views, the simple sore is just as truly specific as the specific sore. We are the more

surprised at this, as Dr. Sturgis, not very long ago, was at least a skeptic as regards the specificity of the chancroid, if not a pronounced unbeliever.

In turning over the leaves at random, we find a number of examples of loose construction and ungrammatical or undignified expression, which might readily have been remedied by a careful revision.

Such points are, however, only alluded to because so good a book should not be marred by errors which would seem to indicate haste or carelessness in preparation. On the whole, we can cordially recommend it as a reliable and satisfactory guide in the diagnosis and treatment of venereal disease, and as containing much useful information, not found—or, what is nearly as bad, very difficult to find—in many more elaborate and pretentious volumes.

A SYSTEM OF SURGERY. Edited by T. HOLMES, M. A. *First American from Second English Edition, thoroughly revised and much enlarged*, by JNO. H. PACKARD, M. D., assisted by a large corps of the most eminent American Surgeons. Three volumes. Vol. I., 8vo, pp. 1007, Pl. ix and 245 wood-cuts. Philadelphia: H. C. Lea's Son & Co., 1881.

To edit Holmes' "System of Surgery" is no light work, and we must congratulate Dr. Packard on the manner in which it has been done. The authors of the original English edition are men of the first rank in England, and Dr. Packard has been fortunate in securing as his American coadjutors such men as Bartholow, Hyde, Hunt, Conner, Stimson, Morton, Hodgen, Jewell and their colleagues. They have revised and added to all the articles except three, which were found so complete as not to require any additions. The new matter varies considerably in amount and character, but is always judicious and useful. In some cases it is very slight, while in others the additions are large in amount and radical in character. Perhaps no chapter has been more difficult to revise than the one on Tumors and Cancers, by Sir James Paget and C. H. Moore. The nomenclature and classification of such new growths has undergone such a decided change within the last few years, that Dr. Longstreth has had no little trouble in welding the old and the new matter into one homogeneous whole. It has been well done, however, and presents the matter intelligibly, and as briefly as possible. To our thinking, it would almost have been better to have written the chapter entirely anew, as is to be done with the articles on the Skin, and Absorbent System. But in view of the still unsettled state of our knowledge, perhaps it is better as it is, since it makes the reader more familiar with the different methods of classification, and therefore the varying terms employed by different authors.

The illustrations of a technical book, especially one that is intended to be so widely circulated among practitioners in the country, where they can have access to no museums and rarely perhaps have post-mortem specimens to examine and study, are of the greatest importance. We are glad, therefore, to see that the original number of wood-cuts has been increased about fifty per cent., while the chromo-lithographs of the second English edition (for they did not appear in the first) have been very well reproduced, but their lettering is too faint, and at night especially is not readily legible.

As a whole, the work, if we may judge by this first volume, will be solid and substantial, and a valuable addition to the library of any medical man. It is more wieldy and more useful than the five volume English edition; and with its companion work—Reynolds' "System of Medicine,"—will well represent the present state of our science. One who is familiar with those two works will be fairly well furnished head-wise and hand-wise.

A TREATISE ON THE DISEASES OF THE NERVOUS SYSTEM. By JAMES ROSS, M. D., M.R.C.P., Lond.; Assist. Phys. to Manchester Royal Infirmary. 2 vols., pp. 594, 1000. New York: William Wood & Co., 1881.

These portly volumes are intended, in the words of the author's preface, to give a tolerably full account of the diseases to which the nervous system is liable, with the exception of the mental diseases. The first volume opens with a consideration of the structure and functions of the nervous system, in which the author treats of the anatomical arrangements and the physiological functions. This is well brought up to date. Thus he gives an account of Meynert's Projection System. He follows Landois' Physiology in his accounts of the anatomical structure, and his figures are derived from this source chiefly. As regards microscopic structure, he has based his account on Ranvier's largely. General etiology and general symptomatology close the first, or general part of the work.

In Chapter VI., he discusses trophoneuroses. In this we observe that he passes under review the contributions of Waller, Schiff, Erb, and especially of Ranvier. In the chapter on the diseases of the nerves of special sense, there is a good account of the ophthalmoscopic appearances in optic neuritis, and a plate exhibiting the changes in the fundus of the eye. This part of the work relating to diseases of the cranial nerves, is well illustrated by cuts taken from Landois' and Hermann's physiology.

Pursuing an anatomical arrangement, he discusses diseases of the cervical and brachial plexuses after the study of the cranial nerves. He first takes up the sensory, and follows with the motor affections. In the diagnosis of paralyses, he uses electricity in accordance with the most recent views, and gives a good account of the reactions of degeneration in the peripheral and spinal paralyses.

The second volume opens with the diseases of the spinal cord and medulla oblongata, or rather with an anatomical and physiological introduction. The "system diseases of the spinal cord and medulla oblongata"—the poliomyelopathies—are well handled, and the articles are illustrated with plates and wood-cuts. The contributions of the most recent publications are here fully presented. In "the mixed diseases of the spinal cord and medulla oblongata," we find the same careful and thorough treatment.

The last part is devoted to the diseases of the encephalon, in which the doctrines of the localization of functions are fully stated, and the various maladies adequately described.

From this brief sketch, it will be seen that this work presents in full detail the diseases of the nervous system. It is a highly creditable production. It is, however, too voluminous, and might be much condensed with advantage. The anatomical and physiological introductions to the several divisions of the subject, might have been omitted, because these topics are treated of more fully by those special works devoted to anatomy and physiology respectively. On the other hand, it may be alleged that the student of nervous diseases will nowhere else find all the facts brought together in a form so convenient and serviceable. Again, cases are related in detail occupying much space, and although interesting enough in themselves, are out of place in a strictly didactic treatise. With these exceptions, we have only praise for the work, which we regard as eminently suitable to the needs of students of nervous diseases. It is true we do not find any original contri-

butions to knowledge, but we have offered that which is better for the purposes subserved by such a work—a full and accurate account of the subject, showing the author's mastery of the whole domain of nervous maladies.

THE MOTHER'S GUIDE IN THE MANAGEMENT AND FEEDING OF INFANTS. By JOHN M. KEATING, M. D., Lecturer on the Diseases of Children at the University of Pennsylvania, etc. 12mo, pp. 118. Philadelphia: Henry C. Lea's Son & Co., 1881.

Though the average of births to marriages may be steadily decreasing, the number of "Mothers' Guides" and "Infant Managements" is decidedly on the increase, and in a time which may be calculated with some accuracy, there will be a special guide, neatly bound and convenient for the pocket, for each mother. But as by that time the number of medical graduates will allow of one for each family, he will probably recommend his own guide for his family, or furnish it at a reasonable rate.

Dr. Keating's Mother's Guide is of a higher order than usual, and draws dangerously near that line which should separate the popular from the true scientific medical work. Perhaps he even oversteps the line, but if so, he does it with rare judgment and discretion. It is just the book to give the mother about to take her family to the country or sea-shore, where doctors are scarce or difficult to reach. Guided by it, almost any woman of average intellect will be rendered better able to cope with the sudden emergencies of croup, cholera infantum, or convulsions, and yet, we trust, will still feel that the doctor, when he comes, knows a little more about the case than Dr. Keating's book has taught her; for on this point the author has been especially on his guard. While we do not agree with him in his estimate of the relative success of wet nursing and bottle-feeding, still his recommendations are in the main safe and simple, and his descriptions of the salient diagnostic points in the few diseases of which he treats are admirable.

SOCIETY PROCEEDINGS.

NEW YORK SURGICAL SOCIETY.

Stated Meeting, November 22, 1881.

DR. T. M. MARKOE, PRESIDENT, IN THE CHAIR.

Congenital Dislocation of the Hip.—Dr. C. T. POORE presented a patient, a child seven and a half years of age, who had congenital dislocation of both hips. It existed without assignable cause. The deformity was not noticed until the girl began to walk. Referring to the pathology of this affection, Dr. Poore remarked that there were two classes of cases; the first, that in which the capsule of the joint is very much elongated, and permits of a sliding up and down of the head of the bone; the second, that in which there is no motion permitted by the capsule, and in that form the limb could not be drawn down. In some cases the head of the bone is much diminished in size, and it had been supposed that the dislocation was due to an arrest of development in the head of the bone as well as the malformation of the acetabulum. With regard to treatment, there had been four cases in which it had been said that the affection had been cured. One case was treated by simple extension. Mr. Brodhurst, of London, had divided all of the muscles inserted in the trochanter, and brought down the limb into its proper position, and held it there, and the patient went about without an instrument at the end of six months. Mr. Holmes saw Mr. Brodhurst's case, and testifies in regard to its success. In France, cases had been treated by scarifying the point in the pelvis where it was desired that the head of the bone should be placed, and then bringing the head of the femur down to this point, and retaining it there, and it had been said that very good results had been obtained. It had been claimed that the muscles in this class of cases are apt to be atrophied, but the patient which Dr. Poore presented did not illustrate that statement.

Compound Fracture of the Leg.—Dr. ERSKINE MASON read a paper on this subject (which will appear in full in an early number number of the MEDICAL NEWS), in which he considered especially the period of time required for repair of compound fracture of one or both bones of the leg, as well as the method of treatment according to his own experience. He had had thirty cases of which he had complete notes from the time of the accident up to the date of their discharge from the hospital. In reviewing the notes of the cases which he had met in his private practice, about the same results had been obtained. He had used almost every variety of splint, and finally reached the conclusion that the plaster-of-Paris dressing, in some one of its varieties, with or without brackets, met the indications in the majority of cases, applied either early or late, better than any other appliance. He had used "through-drainage," in connection with the plaster-of-Paris splint, and it had become with him a favorite mode of treatment. The results which he had obtained had been better than those which usually followed the old practice of sealing the wound. Dr. Mason then spoke of the too free use of the drainage-tube, or at least its too early introduction. His observation in these cases had also led him to believe that we might have too implicit faith in antiseptic dressings, at times, and attempt to save limbs which results proved should have been condemned to amputation.

Of the thirty cases, there was fracture of the tibia in sixteen; of the fibula, in three; of both bones, in eleven. In seven cases amputation was required, primarily in five, of which three recovered and two died; secondarily in two, and both recovered. Eighteen cases were treated by plaster-of-Paris dressings, either by the bandage alone, or assisted and strengthened by brackets. Of these, nine were put up at once, and nine were dressed after the lapse of some days, the average period of treatment being twenty-four days. In the cases in which plaster was applied immediately after the accident, the average period of removal of the dressing was twenty-four days, and in the other cases thirty-eight days. Among the eighteen cases, there were four deaths; one from pyæmia on the eighth day; one from shock, the patient dying on the forty-first day; one from alcoholism on the seventh day; one from erysipelas, death occurring on the sixty-first day. The average duration of the treatment was eighty-two days. Four cases were treated by "through-drainage." The average duration was forty-nine days. Several other cases were treated by the same method, and his impression was that they had all done well. Some of the cases had been treated by Volkmann's posterior tin splint with jute, and the average duration of the treatment was sixty days. Of these, there were two deaths; one of pleuro-pneumonia and septicæmia on the eighth day, and one of erysipelas on the seventy-eighth day.

Dr. POST asked whether fracture involving the tibia without the fibula in sixteen out of thirty cases was not an unusual proportion.

Dr. LITTLE remarked that, with fracture involving the lower third of the tibia, fracture of the fibula at the junction of the middle and upper third also took place in the majority of cases, consequently the fracture of the fibula was well covered with muscles and frequently

escaped notice. He suggested that that fact might possibly have obtained in some of Dr. Mason's cases.

Dr. MASON remarked that that point was taken into consideration; that he examined all of the cases himself, and there was no fracture of the fibula.

Dr. POST asked if, according to the experience of the members, it was usual for the fibula to share the fate of the tibia.

Dr. SANDS said that his experience accorded with that given by Dr. Little.

Dr. W. T. BULL remarked that fracture by direct violence frequently involved the tibia without implicating the fibula. He had seen three or four such cases. Again, fracture produced by heavy weights falling upon the limb, might fracture the tibia without involving the fibula. He thought that in a fair proportion of the fractures produced by direct violence, the tibia alone, without the fibula, was involved.

The PRESIDENT remarked that his impression was that the proportion, as it appeared in Dr. Mason's paper, was placed much too high, and suggested that it might be apparent rather than real, from the fact that the fracture of the tibia might have been reported as compound, and that of the fibula as simple.

Dr. YALE suggested that the cases reported by Dr. Mason were only those of which he had complete notes, and, therefore, it may have occurred that in those there was fracture of the tibia only.

Dr. J. L. LITTLE believed that his success in the treatment of compound fractures during the last twenty years, had been due especially to the use of a fixed apparatus, so that the limb could be dressed at any time without disturbing the fragments. That method of treatment he learned in the New York Hospital. Before he introduced the plaster-of-Paris dressing, the ordinary method of treating compound fractures was by the use of the fracture-box with bran, which permitted the fragments to move upon each other every time the limb was removed from the box for the purpose of renewing the dressings. After the introduction of plaster-of-Paris, he treated a large number of cases by the use of the posterior plaster-of-Paris splint, which left the anterior portion of the limb uncovered, a piece being cut out so as to expose the wound, and then the limb was placed in a fracture-box. To prevent pus from running between the splint and the limb, he applied a piece of oiled silk, which was made to adhere to the limb by the application of collodion, and made a little trough through which the pus could flow, and not enter the fracture-box. Under such treatment, the limbs did better than under the old plan of treatment, by the use of only the fracture-box and bran. During the last few years, he had added to that mode of dressing the limb the antiseptic method, and under the combined treatment, his cases of fracture had uniformly done well. He retains the limb in the fracture-box not more than a week or ten days, if the case does well, when it is removed, and a new plaster splint and bandage is applied, and the patient is allowed to sit up and support the limb upon a chair. He had uniformly used Lister's dressing up to about six weeks ago, when he had a case of compound fracture of the leg, in which the tibia protruded through the clothes so as to be seen upon the outside. In that case, after reducing the fragments, he injected the wound with a solution of carbolic acid, one to fifty, then covered it with borated cotton saturated with the same, and over the whole he placed ordinary cotton and secured it with a bandage. The limb was then tied up in a pillow, and a straight splint applied upon either side of the pillow, and it remained in this temporary dressing for four days, during which time there was no rise of temperature, and no discharge appeared through the dressings. He then removed the dressings, and applied a plaster-of-Paris splint; dressed the wound again with borated cotton and carbolic acid, which had been continued up to the present time, and there had been no bad symptoms whatever, except at the end of fourteen days, when some displacement took place accidentally, and there was slight inflammation about the wound. There was, however, no rise of temperature, and no chill, and the patient, who was a man sixty years of age, at the present time was doing well.

Dr. BRIDDON thought that the fracture-box had been discarded altogether. He could not conceive of a more painful plan of treatment. He advised the application of the plaster-of-Paris dressing immediately, introducing a drainage-tube, covering the wound with thick pads of oakum, and suspending the limb in a sling. This method of treatment he thought was much more comfortable than the use of the fracture-box. He certainly believed, with Dr. Little, that the means which obviated the necessity for frequent change of dressing were the best.

Dr. LITTLE said that he had always condemned the plaster-of-Paris *bandage* in the treatment of recent fractures. He was well aware that experts could apply such a dressing without danger, but for the ordinary practitioner, he thought that the use of the plaster-of-Paris bandage was always attended with a great deal of danger, such as might arise from interruption of circulation and consequent gangrene. On the contrary, the plaster-of-Paris *splint*, which he used, leaves the limb open upon its anterior aspect entirely, and it is almost impossible to have obstruction to the circulation occur as a result.

Dr. POST believed that in compound fractures, attended with severe injury to the soft parts, it was safer to place the limb in a fracture-box than it was to put it up immediately in an immovable apparatus. He believed that he had seen cases of gangrene which were due to the fact that the limb had been placed in an immovable apparatus at once, and that the limb could have been saved had it not been subjected to such pressure. The fracture-box with bran possessed the advantage of giving equable support without producing undue pressure upon any part of the limb.

Dr. BRIDDON said that he could accept Dr. Little's treatment by the use of the posterior splint, as it was about as serviceable as the plaster-of-Paris bandage, but he could not see the necessity of putting the limb in a fracture-box.

Dr. LITTLE thought that it was easier to put the limb in a fracture-box than it was to put it in a sling.

Dr. W. T. BULL had abstained from the use of the plaster-of-Paris bandage where it was necessary to frequently change the antiseptic dressings during the first two weeks, inasmuch as it would be laborious to remove and reapply the plaster dressing every three or four days. Again, he thought that the drainage-tube should be withdrawn after the period of granulation had been reached, and the wound treated openly. Then the limb might be placed in a plaster-of-Paris splint, and the dressings applied to the wound through a fenestrum. Previous to that stage, he had almost always used Volkmann's posterior tin splint, and suspended the limb in an iron cradle.

Dr. BRIDDON thought the danger of gangrene from pressure, mentioned by Dr. Post, incident to local swelling of the limb, could be obviated by using cotton-wool very thick next the limb, and over that applying the plaster-of-Paris bandage.

Dr. POST remarked, with regard to drainage-tubes, that he had known mischief to be done by their acting as foreign bodies when retained too long in the wound.

Dr. LITTLE said that Volkmann, at the London International Medical Congress, referred to the fact that drainage-tubes had been permitted to remain in various

parts of the body without producing any irritation, and it subsequently became necessary to cut them out.

Dr. POST had known indurated sinuses to be the result of leaving them in position too long.

The PRESIDENT asked Dr. Mason what his impression was with reference to sealing the wounds in compound fracture, after the old plan, which might be called Sir Astley Cooper's method, as compared with covering them with antiseptic dressings.

Dr. MASON replied that his experience had been limited to five cases; two of the leg, two of the thigh, and one of both bones of the forearm. In those cases the strict antiseptic dressing was used, and he believed the wounds closed sooner than they would have done under the old plan of sealing the wounds with collodion and cotton. He was satisfied that the antiseptic dressings gave the best results.

Dr. YALE referred to one case of compound fracture of the leg, in which the Lister dressing was applied to the wound, and in less than ten days it was removed, and the case was treated as one of simple fracture.

Dr. BULL thought that the surgeon might be guided somewhat by two considerations; first, the character of the violence; second, the damage done to the soft parts. If the violence was such as did not comminute the bones, and the opening was small, and there was evidence that the soft parts had not been extensively contused, and no great amount of blood had been effused into the tissues, he would prefer to use the antiseptic dressing. To settle these questions, however, was sometimes a matter of considerable difficulty, and required a somewhat varied experience. He had seen perhaps half a dozen compound fractures of the leg, involving both tibia and fibula, where pin-hole wounds of that kind existed, and there was no reason to believe the fracture in the bones was extensive or comminuted, and he had put on the antiseptic dressing, and the result had been entirely satisfactory, and he should prefer it to sealing up the wound in the old-fashioned way.

Dr. SANDS thought that the results of treatment of such cases of compound fracture of the leg were very much better than the results obtained ten or fifteen years ago at the New York Hospital. In those days it was rather expected that complications would ensue in such cases; but, at the present time, serious inflammation or septic infection seldom occurred during the treatment of a compound fracture. In the Roosevelt Hospital there were now three cases of compound fracture of the leg, treated simply by washing out the wound with carbolic acid, and then covering it with antiseptic dressings; in two of these the wounds had closed entirely, and in the other, although the wound was not completely healed, it was nearly so, and no bad symptoms had at any time been developed. He had no doubt whatever that the antiseptic plan of treatment gave much more favorable results than the old-fashioned practice of sealing the wound.

Dr. LITTLE said that at St. Vincent's Hospital a large number of cases of compound fracture were treated, and the rule was always to wash out the wound with carbolic acid and apply an antiseptic dressing, and it had now been four or five years since he had seen a case of compound fracture in which there had been discharge sufficient to penetrate the dressings; certainly he had not met with a case in which it became necessary to make a counter-opening to afford exit for pus.

Dr. POST referred to a compound fracture of the leg, situated in the immediate vicinity of the ankle-joint. The bones were badly comminuted, and the soft parts were extensively lacerated. He attempted to save the limb. He washed the wounds thoroughly with carbolic lotion, inserted drainage-tubes, and put up the limb in a plaster-of-Paris apparatus, and for several days there were good prospects for saving it; gangrene, however, occurred, and amputation became necessary. The patient died on the following day of tetanus.

Dr. MASON asked Dr. Little if, in the treatment of cases of compound fracture at St. Vincent's Hospital, drainage-tubes were used.

Dr. LITTLE said they were very rarely introduced.

Dr. LANGE thought it was especially important in cases of compound fracture to consider whether or not the wound was already infected. If the wound was perfectly fresh and without infection, antiseptic dressing might be applied simply to prevent infection, but if infection was already present, then the application of an antiseptic dressing alone could not prevent inflammation. In the latter class, disinfection of the wound should first be made, and each case must be treated according to its special features. He thought it was according to common experience in compound fractures that large, open, external wounds were not so dangerous as those of moderate or small size, with extensive injury to the soft parts and the bone inside. Therefore, it was important to decide, with reference to every surgical wound or injury, how extensive had been the injury to the bone or the soft parts, whether a great deal of tension and swelling was to be expected, and how profuse the discharge would probably be, and if the circumstances were such that a profuse discharge was to be expected or such loss of vitality in the parts as is favorable to the development of inflammation or decomposition, as free exit for it as possible must be maintained. With a view to prevent inflammation in a case of compound fracture, or if inflammation was present to counteract it, immobilization must above all other things be observed. It must, however, be kept in mind that through immobilization we prevent inflammation in so far only as we avoid that condition of tissues in which they represent a more favorable soil to the development of inflammation. Inflammation in compound fractures in most cases was infection from without. Immobilization had been practised long ago. The good results, however, dated since that comparatively recent period when surgeons learned to combine it with strict antiseptic measures. Listerism, of course, had not the monopoly for the latter, although it was a very efficient method. Antiseptic procedures, however, were indispensable for good results in compound fractures, and it was more than probable that all kinds of successful treatment owed their efficacy to their antiseptic qualities. It was only necessary to state what constitutes the latter.

Dr. SANDS remarked that the difficulty hinted at by Dr. Lange was an objection to the employment, as a general rule, of the plaster-of-Paris splint, which envelops the limb except where it is exposed at the situation of the fenestra. The advantage of the plaster-of-Paris splint in simple fracture, is the immobility of the limb which it secures, preventing thereby pain and injury of the soft parts caused by movement of the fractured ends of the bone. If this end could be accomplished after compound fracture, the use of the splint would be equally advantageous as in a simple fracture, but he thought that this was rarely the case. If the plaster-of-Paris splint was applied with sufficient pressure to secure immobility, we expose the patient to the risk of mischief resulting from swelling, and may be obliged to remove the plaster-of-Paris splint after the lapse of a few hours or days. If, on the other hand, to avoid this danger liable to arise from swelling of the limb, we put it up loosely, or insert large pads of cotton, as suggested by Dr. Briddon, we shall find, if no swelling takes place, that the limb will soon be too loose, and the dressing will rather cover the limb than keep the fractured bones in position. Another objection to the use of the plaster-of-Paris splint in compound

fractures of the leg, was the difficulty, unless the fenestra was exceedingly large, of applying efficient antiseptic dressings. For this reason he had followed the practice adopted by Dr. Bull. Volkmann's posterior splint gave adequate support to the limb, while it left the anterior part, where the wound in the skin usually existed, open for inspection, and allowed the application of antiseptic dressings without much disturbance of the fractured bones. Furthermore, it allowed the application of the bandage over the limb with just such an amount of pressure as was necessary to give proper support. He should, therefore, defer the employment of the plaster-of-Paris splint until all inflammatory swelling had subsided, when he thought it could be used with the best results.

Dr. LITTLE thought it a good plan to make a distinction between the plaster-of-Paris *bandage* and the plaster-of-Paris *splint*. The plaster-of-Paris bandage was a dressing which enveloped the limb entirely, whereas the plaster-of-Paris splint was an apparatus which could be applied to the posterior aspect of the limb, and did not render the limb liable to be injured from obstruction to the circulation, and, at the same time, it rendered the fractured bones immovable, and allowed them to be inspected at pleasure.

Division of the Tendon of the Flexor Profundus Digitorum.—Dr. POST narrated a case as follows: A male patient presented himself at his clinic, who, two months before, had wounded the palm of the left hand very nearly in front of the articulation of the first phalanx of the ring finger with the metacarpal bone. After that injury he was able to flex the finger with the other fingers for three days, and then suddenly, after tossing a child, something gave way in the finger, and he lost the power of flexing it entirely. After the lapse of two months the wound had healed entirely, and passive motion could be made, but the patient had no voluntary power over it. It was evident that there was division of both tendons belonging to that finger. Dr. Post made an incision down to the sheath of the tendon, which he divided, and found the distal end of the tendon lying loose in the sheath, entirely separated from the proximal end, and division had taken place just at the point where the tendon of the flexor profundus passes through the slit in the flexor sublimis. He found that the end of the tendon of the flexor profundus was smooth and rounded, and there were little rounded bulbs in the incision of the tendon of the flexor sublimis. He then extended the incision to the extent of about three centimetres, but was not able to find the proximal end of the tendon. He believed that there was incomplete division of the tendon at the time of the injury, and that the separation became complete at the time when the patient felt something give way in the palm of the hand three days afterward. The case was interesting, from the fact that the division was not perfect at the time of the receipt of the injury, and from the fact that there was such a wide separation of the ends of the tendon. A carbolic lotion was applied to the wound, and no unfavorable symptoms had followed the operation.

Dr. SANDS remarked that he had been similarly disappointed in such an operation, and he also had the impression that, as a rule, the separation of divided pieces of tendon was so great as to discourage any attempt to replace the parts after the lapse of any considerable period of time.

The PRESIDENT remarked that he had had the same experience in divisions of the tendons of the fingers.

Dr. POST remarked that when the tendon was within the sheath, it probably receded more than when elsewhere.

Dr. LITTLE remarked that he failed to reach the proximal end of the tendon in a case immediately after the injury.

Vesical Calculus. Bigelow's Operation.—Dr. LITTLE presented the fragments of a vesical calculus removed by rapid lithotrity, with the following history: A man, sixty-three years of age, a patient of Dr. A. H. Smith, had suffered from frequent micturition for six months. Symptoms of stone developed four weeks before he saw the patient. The patient was etherized, and Bigelow's medium-sized lithotrite was introduced. The stone was seized and crushed, and the fragments removed through the evacuating-tube, and the bladder irrigated until no further fragments could be found. The operation lasted only fourteen minutes. Before the operation, the patient was obliged to pass water every hour; after the operation, he could hold his urine for six or eight hours. Not the slightest unpleasant symptoms followed the operation.

Sequestrum from the Sternum.—Dr. POST presented a small sequestrum removed from the upper part of the sternum. The patient was a woman, forty-five years of age, who was under his care in the Presbyterian Hospital in August. She had had caries of the sternum for some time. He then removed portions of dead bone, and an opening was made extending into the anterior mediastinal space. The finger could be passed behind the sternum without unpleasant consequences following. She left the hospital, but subsequently came under his observation, and he found, on inspecting the wound, a piece of bone present at the deeper part of the cavity, which he seized with a pair of forceps and extracted, and it was the specimen presented. Since that time the sore had granulated, and the parts looked as if recovery would take place. There was no distinct syphilitic history in the case. The specimen was interesting, from the fact that it was a sequestrum from a spongy bone.

PHILADELPHIA ACADEMY OF SURGERY.

Stated Meeting November 7, 1881.

S. D. GROSS, M. D., PRESIDENT, IN THE CHAIR.

Aneurism of the Femoral Artery Cured by Pressure.—Dr. S. W. GROSS exhibited a case, which he said was really under the treatment of Dr. S. D. GROSS, the President, with the following history:

About a year ago, a colored hod-carrier, aged twenty-seven years, began to suffer from a constant dull, aching pain in the left knee, which he attributed to rheumatism, and which was increased by hard work. Four months prior to his admission into the Jefferson Medical College Hospital, he noticed a beating just above the middle of the thigh, and he found at this point a rather soft pulsating swelling, about the size of a common marble. On admission, there was an aneurism of the superficial femoral artery at the apex of Scarpa's space as large as the fist, and the pain was still present in the knee. There was no history of syphilis, but he fell from a ladder and bruised the corresponding leg a few months previous to the appearance of the tumor.

On the 7th of October, pressure was maintained for three hours upon the common femoral artery by means of a pestle, when it was discontinued on account of the severe pain which it produced. On the 9th of October, the same measure was employed for five hours, but without any benefit. Four days subsequently, two five-pound bags of small shot and a leaden weight of ten pounds were applied to the artery and the circulation completely controlled. The constant movements of the abdominal muscles in respiration, and the restlessness of the patient rendered it necessary to hold the weights in place, and at times to make slight pressure with the hand to overcome the pulsation. At the expiration of an hour and a half, with a view to relieve suffering, one-third of a grain of morphia was thrown under the skin, and the dose was repeated in

two hours. At the end of another thirty minutes, or of four hours from the beginning of the treatment, all pulsation had ceased in the tumor, which had become hard and firm; but the compression was maintained for five hours longer as a matter of precaution. After the contents of the sac had consolidated, there was but little suffering and the patient slept most of the time. At the present date, the tumor is diminished one-fourth.

Traumatic Aneurism of the Posterior Tibial Artery.—Dr. JOHN H. PACKARD read the history of this case. Joseph D., æt. eleven years, a sturdy and well-conditioned boy, was admitted into the Episcopal Hospital October 8, 1881, with the following history: Two weeks previous, he had received a blow on the inner side of the left ankle, from a bit of iron thrown by a playmate. The part "swelled a good deal," but the hurt was not thought much of until the day before his admission, when, in his mother's words, "the ankle burst, and he lost a cupful of blood." Dr. Packard's attention was not called to the case until four days after the admission, when he found a small, pulsating tumor, just back of the inner malleolus. The next day he laid the tumor open, and applied two silk ligatures, one above and the other below. Three days afterwards, the bandage became suddenly saturated with blood, and the boy fainted. A compress was firmly applied, and Dr. Packard was summoned. Enlarging the wound somewhat, he found the upper ligature loose, apparently from the cutting through of some areolar tissue included along with the artery. A second ligature was applied, which held until the 18th, somewhat over forty-eight hours, when bleeding again occurred, in the evening. He then exposed the artery a little higher up, and tied it again, at a point about a quarter of an inch above the one previously chosen. After this there was no further trouble; the wound did well, and on the 23d, ten days after the first ligation, and five days after the third, both ligatures were found lying loose. Healing progressed very rapidly, and the boy is ready for discharge.

Hæmorrhage from a Wound of the Facial Artery, in which Ligation was Performed.—Dr. PACKARD related the following history: B. F. Z., æt. twenty-five years, was brought to the Episcopal Hospital on October 27, blanched and much prostrated by bleeding from a wound in the left cheek, about three-quarters of an inch from the angle of the mouth. Another wound about one and a half inches long, just over the edge of the lower jaw, seemed to be at right angles with the facial artery, and had been closed by means of a large pin and a figure-of-eight suture. The man stated that the wounds had been inflicted with a penknife, about ten days previous, and that two severe hæmorrhages had occurred, one on the eighth day, and the other on the evening before his admission. Ether was at once administered; the clots turned out of the upper wound, enlarged for the purpose, and a silk ligature applied to each end of the divided artery. The edges of the skin were then brought together by means of hare-lip sutures, and a wet dressing applied containing a small amount of carbolic acid. Healing took place rapidly, the ligatures coming away on the seventh day.

Arterial Hæmorrhage in a Case of Extensive Burn; Ligation of the Brachial Artery.—Dr. PACKARD also related the case of Hilda A., æt. eighteen, admitted into the hospital during the service of his colleague, Dr. Hunter, September 7, 1881, having sustained, two weeks previously, severe burns from trying to hasten the kindling of a fire by means of coal-oil. Her body and both arms were terribly injured, and when he came on duty, October 1, the process of granulation was going on slowly, while from the irritability of the stomach there was reason to fear serious involvement of that organ, or of the duodenum. This, however, was overcome after a few days, and her condition was greatly improved. On the 4th of November, at his daily visit, the resident surgeon, Dr. Robins, informed him that arterial hæmorrhage had occurred from the left arm, and had been controlled by a compress over the brachial artery. On removing this compress (the patient being etherized), several jets of arterial blood spurted from vessels opening on the granulating surface at the inner part of the arm. He immediately, with his fingers, broke away the tissues at the inner side of the biceps so as to expose the brachial artery at the usual point of ligation, when he applied a silk thread. No further bleeding occurred, and the case has progressed since as if no such alarming incident had threatened to interfere with recovery.

Dr. WM. HUNT recollected a number of cases of spontaneous aneurism in negroes, and inquired whether the disease was more frequent in the black than in the white race. He had recently seen a case of traumatic aneurism of the facial artery, to which Dr. Levis had also been called in haste, which had formed in the course of one day. Dr. Levis and he arrived at the house at the same time. The whole mass was dissected out and the bleeding vessels tied.

Dr. J. M. BARTON spoke of once seeing an aneurism which so resembled an abscess in the cervical region that it had nearly been laid open by the gentleman in attendance. He was deterred, however, by noticing the pulsation. The patient died from rupture of the sac, and the autopsy showed evidence of syphilis. The aneurism was of the carotid artery.

Fracture of the Patella Treated by Hooks.—Dr. T. G. MORTON exhibited a patient who had been under treatment for fracture of right patella. There was used lead water and laudanum for a week, when Dr. Morton's hinged modification of Malgaigne's hooks were applied. The ordinary hooks would not have obtained accurate apposition, since it was necessary to have the upper pair of hooks widely separated; while the lower ones were close together. No irritation followed. It is possible that bony union is favored by the fact that circulation is not interfered with when the hooks are applied, as when tight bandages are adjusted. The slight irritation due to the insertion of the points may increase the tendency to throwing out of callus for the bond of union. In this case, hooks had remained in position fourteen days.

Dr. PACKARD said he was probably the first surgeon in Philadelphia to apply Malgaigne's hooks.[1] The patient, after having what was thought to be bony union, fell and refractured the bone. There is no danger, as has been supposed by some, of penetrating the joint. He himself now usually employs the method of Sanborn, which consists in loops of adhesive plaster that bring the fragments together by twisting.

Dr. NANCREDE mentioned a case where there was no separation, though crepitus was present. He could just catch his finger-nail between the edges of fragments. Could such a fracture, without laceration of the tendon and fascia, be produced by muscular action?

Dr. HUNT had once treated a patient who had fracture of both bones without any separation. He needed no apparatus, and obtained a good cure.

Dr. WILLARD recently saw a case undoubtedly due to muscular contraction and no separation existed.

The PRESIDENT spoke of the recent successes in wiring old fractures where non-union had occurred; and also referred to the method of passing wire through the ligament of the patella and quadriceps tendon in order to bring parts together without interfering with the joint.

Dr. MORTON called attention to two cases he had

[1] See *American Journal of the Medical Sciences*, April, 1861.

seen; in one the tendon was ruptured above the patella; in the other, below it. No wiring was done. One patient is known to have a good limb for walking, but ascending steps is somewhat difficult.

Dr. WILLARD had had a case where the ligament of the patella was torn close to the tibia, but he had hesitated about using wire.

Dr. PACKARD thought it would be difficult to get a good hold for wiring so close to the bone, and feared trouble might arise from inflammation of the bursa beneath the patellar ligament. He had seen recurring bursitis in this region following injury of the part. Sutures might be better employed in rupture of the quadriceps above the bone.

Supernumerary Thumbs.—Dr. NANCREDE exhibited two supernumerary thumbs removed from two children who had double thumbs on the left hand. The additional digits sprung from the head of the metacarpal bones, and were well formed. There was no hereditary predisposition. A child born between these two presented no malformation.

Dr. MORTON recently saw an Italian infant without ears. There were little nodules on each side of the head, and an indistinctly felt depression under the skin, as though a meatus might exist there.

Urinary Calculi.—Dr. J. H. BRINTON reported the case of a man whom he had sounded three or four times, about eighteen months ago, and failed to find stone, though the rational symptoms were present. Last spring, however, he found stone, and employed Bigelow's rapid lithotrity method, by which a large amount of fragmentary matter was removed. He sent the patient home because the weather was hot, but on his return, this fall, removed over fifty calculi by lateral lithotomy. He stated that he believed Dr. Agnew had once removed about two hundred calculi. The patient he had just referred to was able to fish small calculi out of his own bladder by inserting a soft rubber catheter and entangling the stone in its eye.

The PRESIDENT stated that he had removed as many as fifty-four calculi, and that Physick had extracted nearly one thousand at one operation.

Cheap Water-Bed to Prevent Bed Sores.—Dr. MORTON mentioned the use at the Pennsylvania Hospital for the Insane of water-beds, made by stretching a piece of gum cloth over a shallow trough. Drs. LEVIS and MEARS also spoke of the cheapness and advantages of this substitute for rubber mattresses filled with water, which they had seen used in other cities.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 24, 1881.

FORDYCE BARKER, M.D., PRESIDENT, IN THE CHAIR.

The Cell Doctrine and the Bioplasm Doctrine.—Dr. LOUIS ELSBERG read a paper with this title. He stated that last May, at a meeting of the Laryngological Association, he presented an account of some histological investigations of the cartilages of the larynx, and, as the structure of hyaline cartilage has an important bearing on the subject of his paper, he gave a brief résumé of the views then advanced. As the result of his investigations, Dr. Elsberg is not only able to confirm the views of Heitzman and others, that there are cilia-like offshoots or prolongations of the substance of the cartilage corpuscles penetrating into the basis substance, but has been able to satisfy himself that these offshoots form an interconnecting reticulum through the basis substance, and that there exist in this network masses of living matter. Hyaline cartilage is, therefore, a mass of living matter, in which blocks of basis substance are imbedded; and the author believes that the communication of these protoplasmic processes with each other and with the surrounding tissues permit the processes of nutrition to be carried on without the assumption of "juice canals."

Pyæmic Parotitis.—Dr. CHARLES A. LEALE read a paper on this subject, and presented two of the patients on whom he had operated, one showing complete loss of the gland from suppuration, the other adhesions at the cheek over the duct of Steno. The latter case subsequently had goitre, which was treated successfully by the internal and external use of iodine.

Dr. Leale differed from the numerous writers who thought that suppuration of the parotid arose from a mechanical occlusion of the *ductus Stenonianus*, as a result of dryness of the mucous membrane of the mouth, and stated that his observations led him to believe that when it occurred in any of the enteric fevers, dysentery, or osteo-myelitis, it always arose from systemic poisoning from an ulceration of such a low grade where constitutional changes were constantly going on, that the glands of the body exerted their influence to eliminate the materies morbi, and therefore metastatic abscesses of the parotid, liver, lungs, brain, etc., were formed. As to the frequency of suppuration of the parotid, he stated that statistics showed it to be a not very uncommon disease, as Hoffman gives 16 cases in about 1600 typhoid fever patients, and subsequently, after the employment of the antipyretic treatment, 1 case occurred in every 550, or 2 in 1100 patients, both of which terminated fatally. In illustration of this disease, when suppuration of the parotid occurs, he gave the history of four cases: one from pelvic cellulitis, one from ulceration of the bowels in typhoid fever, one from general ulceration of the mouth and stomach, and one from suppuration of the kidneys following an acute attack of degenerative nephritis; and, in the same connection, gave the history of two cases of metastatic abscesses of the liver as illustrative of the same provoking cause.

He had never seen a case of pyæmic suppuration of the parotid end in recovery when the pus was not permitted an exit. In three of his cases he had opened by incision and in the other profuse discharge of pus ran from the ears for a period of seven months, the discharge coming through the perforations from the middle ear. In one case only had he seen perforation of the floor of the cartilage of the external auditory canal, and that was one of the patients exhibited to the Academy, who showed the deformity resulting from the complete loss of the gland, resulting in a large cavity under the angle of the jaw.

In explanation of the modus operandi of this exit through this firm cartilage, Dr. Leale thought pressure could accomplish this result, as the gland is so firmly bound down by dense fascia. If a small aneurismal tumor can produce perforation of the dense, loosely-attached œsophagus, and cause fatal hæmorrhage into the stomach, a specimen such as he had presented to the New York Pathological Society, why not perforate a cartilage held so firmly in place?

The first case shown was a lady, who at the age of forty-one years had a metastatic abscess of the parotid gland, with discharge of pus through an opening into the cartilage at the floor of the external auditory canal. Complete destruction by suppuration of the entire parotid gland followed, producing a permanent deformity on that side of the neck with a deep hollow beneath and under the angle of the jaw. This lady had an attack of general peritonitis and pelvic cellulitis, and death was nearly caused by suffocation in consequence of pressure on the pharynx. Dr. Leale opened the pharyngeal abscess, and then had through and through drainage; the director inserted just above the angle of the jaw could be pushed through the parotid gland and felt with the finger in the throat.

In this instance the cerebral symptoms were very

profound, complete blindness, deafness, delirium, and slight opisthotonos, showing that the disease had extended to the base of the brain. The temperature ran up on several occasions to 106° F. The convalescence was long, and for months the severe attacks of cephalalgia rendered life miserable. She can now see fairly, and hears nearly as well as ever. Since her attack she has never had a day free from pain, and will probably continue to have pain for several years. The treatment in her case was by iodide of potassium and tonics.

In the second patient the parotid abscess followed a very severe attack of typhoid fever, the parotid was opened under the lobule of the ear, where the duct of Steno was occluded, and when Nature had made an effort to form a spontaneous opening on the cheek.

Our attention is generally drawn to pyæmic parotitis by an earache, which on examination is found to be associated with great pain on pressure under the lobule of the ear, and to extend beneath the angle of the jaw, along the course of the gland. We find hyperæmia, and within twelve hours parenchymatous infiltration, consequent enlargement and œdema; this proceeds gradually until the end of the third or fourth day, when, as a rule, minute abscesses will form in the structure of the gland, either to increase, to coalesce and form one large parotid abscess, or, when the vital forces are nearly exhausted, to remain as numerous multiple abscesses showing a low grade of inflammation.

We may expect metastatic abscesses in osteo-myelitis, and Dr. Leale gave an illustration where, after an amputation of the arm and complete healing of the stump, inflammation within the Haversian canals and in the cancellated tissue of bone occurred, ending in death by cardiac thrombosis. At the necropsy there was found a large abscess in the liver. The centre of the bone above the amputation was also filled with minute abscesses. This patient had presented all the symptoms of acute pyæmia, had recently returned from a malarial district, and his symptoms much resembled the low grade of remittent fever. The end of the stump kept well until within a few hours of death.

A remarkable illustration was brought forward showing the connection of metastatic abscess and osteo-myelitis, and demonstrating, in the first place, the impossibility for the surgeon at times to prevent the occurrence of inflammation of the cancellated structure of bone after certain gunshot injuries, and secondly, that even in primary union of the flesh, when hermetically closing of the wound immediately follows, the sepsis may be lodged on a ball before it entered the body, and be deposited as it passes through the bony structure, there to commence an ineradicable infection sufficient to produce ulcerative softening whereby the entire system becomes infected, a metastatic abscess follows, and death inevitably ensues. Dr. Leale considered such a wound a mortal one, although others might escape with much more serious injuries, yet in this instance the ball caused the injury to the bone, and at the same time deposited a septic poison, impossible for the powers of nature to overcome or the surgeon to reach. Even when the affected bone could be removed by subsequent operation, he had seen the disease reappear in other parts, and in the end cause death.

The two illustrative cases noticed were observed by him while Assistant Surgeon U. S. V. One was Captain C——, who came under his observation April 16, 1865. He had been wounded an inch above the elbow-joint by a ball fracturing the humerus. The limb was amputated in the middle third by the flap method, and had entirely healed. The patient was apparently well, and was told there was no necessity for him remaining in hospital. He was permitted, however, to remain for a rest for a few days, but twenty-two days after his admittance he died of pyæmia. At the necropsy, Dr. Leale found osteo-myelitis of the stump-bone and a large metastatic abscess in the liver. In the second case, after the discovery of osteo-myelitis, a second amputation did not check the disease, and death occurred. Metastatic abscesses were found at the autopsy.

NEW INVENTIONS.

An Apparatus for Weight and Pulley Extension.

Dr. Frederick C. Sheppard, Surgeon to the Children's Hospital Dispensary, Philadelphia, has devised an ingenious form of apparatus for weight and pulley extension, which admits of application to the ordinary bedstead. The two forms of apparatus shown in the accompanying cuts were designed for use in the treatment of diseases or injuries of the lower extremity requiring confinement to bed and extension by weight and pulley.

That shown in Fig. 1 is intended for cribs or beds with high foot-pieces, and consists of four rods, *a*, *a*, *a*, *a*, joined at the ends, forming a parallelogram, to the upper corners of which are affixed two hooks, *g*, *g*, by which it is suspended from the upper bar of the foot-piece. A curved rod, *d*, bearing a wheel, *e*, surmounted

Fig. 1.

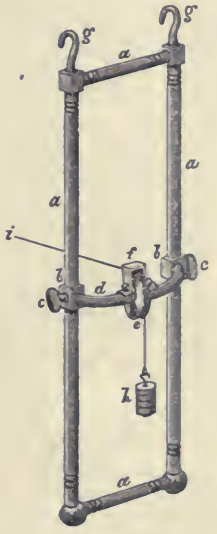
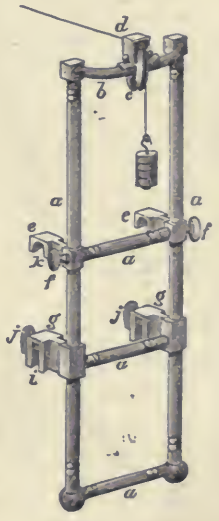


Fig. 2.



by a guard, *f*, slides by means of the attachments, *b*, *b*, upon the two vertical bars, *a*, *a*, and can be adjusted to any desired height by the set-screws, *c*, *c*. A flexible metallic or other cord, attached at one end to the stirrup on the limb of the patient, and at the other to a weight, *k*, passes over the wheel, *e*, and is prevented from slipping off by the guard, *f*.

Fig. 2 represents the apparatus adapted to the ordinary iron hospital bedstead. In it the whole framework can be elevated or depressed. The slots, *k*, *k*, fix the attachment, *e*, *e*, to the upper bar of the foot-piece, while the attachment, *g*, *g*, is firmly clamped to the lower bar by the slots, *i*, *i*, and the set-screws, *j*, *j*. The frame being adjusted to the required height is retained in position by the set-screws, *f*, *f*. The curved rod, *b*, bearing the wheel, *c*, and the guard, *d*, is the same as in Fig. 1, except that instead of sliding, it is permanently attached to the upper portion of the frame.

The material used in the construction is polished brass, which gives an ornamental effect. A number of these apparatus were made by Messrs. Gibson, Shaw & Co., of this city, and have been used with satisfaction in the Children's Hospital for upwards of two years.

CORRESPONDENCE.

WAS THE THORACIC DUCT INJURED IN THE CASE OF PRESIDENT GARFIELD?

To the Editor of The Medical News:

SIR: It is a curious feature in some of the criticisms and comments on the President's case, that, in view of the ante-mortem symptoms and the post-mortem examination, it should have been asserted that the "rapid emaciation and mal-nutrition" were due to a wound of the thoracic duct. As distinguished a surgeon as Dr. Wm. Hunt says (*Medical News and Abstract*, November, 1881): "There was the origin of the thoracic duct, with its receptaculum chyli, right in the line of the wound; hence, the rapid emaciation, and the other nutritive disabilities, further explained by disturbance of the sympathetic trunks and ganglia."

The official record of the post-mortem examination (*American Journal of the Medical Sciences*, October, 1881), shows, by statement and diagram, the track of the ball in the spinal column to have been by a small aperture of entrance, one-quarter of an inch distant from the intervertebral foramen of the twelfth dorsal and first lumbar vertebræ, and the centre of the foramen of exit to lie one-half an inch to the left of the median line. With a view to a determination of the exact relations of the parts, I have made, within the past week, two dissections at the University of Pennsylvania, studying with especial care the thoracic duct and receptaculum chyli, and the structures immediately adjacent.

The following is a summary of my observations. The receptaculum lay in one case directly upon the median line, in the other about a line to the right of the median line, closely applied to the body of the second lumbar vertebra, commencing in a pouch at its inferior border, and tapering upwards and to the right, to terminate as the thoracic duct at the lower border of the first lumbar vertebra. The thoracic duct then applied itself closely to the right crus of the diaphragm, and passed up through the aortic opening. The whole of this structure was efficiently protected, anteriorly and to the left by the abdominal aorta, and to the right by the vena cava.

Spicules of bone could not then have reached it from either side, where it was protected by more important organs; and to have been injured posteriorly requires the supposition of more extensive injury to the vertebra than has been stated.

The following summary of symptoms present in the six recorded cases of wound of the thoracic duct, is given by Bradley ("Injuries and Diseases of the Lymphatic System," London, 1879), and is of interest in connection with the study of this historic case.

"Hoffmann's first case was that of a woman wounded through the left side with a knife. Following the wound there was a copious discharge of a spontaneously coagulating fluid, which was observed to be milky during digestion, and clear while the patient was fasting. In his second case, the escape of chyle followed the opening of an abscess of the posterior mediastinum. Monro relates a case where the thoracic duct was wounded by a stab; the lymph escaped externally and also into the pleural cavity, interfering with the heart's action. Guiffort's case is of a similar nature. Bonnet gives the history of a Baron Heinden, who was wounded in battle by a bullet, which escaped beneath the left scapula. From this wound there gradually began to flow an excessive quantity of lymph, 'tanta in copia effluxisse, ut non solum lintea quintuplicata, indusium lodicesque imbuerit, sed quoque limbos inundaverit.' The patient lived for several months, dying at last of exhaustion." In Quincke's case, "the pleural cavity became so full of extravasated lymph that paracentesis had to be performed to prevent suffocation, from which, indeed, the patient eventually died."

It will be seen from the above, that a stillicidium of lymph, generally in great quantities, is the *invariable* attendant of wounds of this nature. The fact that this symptom was wanting, so far as we know, in the President's case, precludes, with even greater certainty than the anatomical considerations, the possibility of any injury to this most important organ.

I am, sir, yours, etc.,

HOWARD ATWOOD KELLY.

PHILADELPHIA, 323 South Seventeenth Street.

NEWS ITEMS.

NEW YORK.

(*From our Special Correspondent.*)

PROSECUTIONS UNDER THE MEDICAL ACT.—The report of the Board of Censors of the Medical Society of the County of New York, read at the last annual meeting, gives a detailed account of the work done in the attempt made to enforce the medical law of 1880, which requires the registration of practising physicians in the county, and the prosecution of illegal practitioners. Several quacks were prosecuted, but only one of them was fined, one Abraham E. Cox, who was practising under a diploma improperly obtained from the defunct "Castleton Medical School," in Vermont. The fine imposed was $100. Another "irregular," the charge against whom was the practising under a diploma illegally obtained from an Eclectic School in this city was, upon his preliminary examination, found unable to speak English. How he passed the examination for his degree he could not tell. This case was presented to the Grand Jury for indictment, but this sapient body declined to consider the case, and refused to examine the Society's witnesses; indeed, one wiseacre informed the President of the County Society, Dr. A. E. M. Purdy, that there was no need for a physician to have a diploma. A third, a man named Dr. Kraft, who registered as a graduate of the Electro-Therapeutic Institute of Philadelphia (whatever that is), escaped on the ground that he cured by electricity and magnetism only, and used no drugs. The Justice held that he was not a medical practitioner, under the statute, and dismissed the case.

Many more cases are to be prosecuted, and one among them promises to be important and interesting. The charge made is perjury, and the penalty is the State prison. The accused, as is clearly shown, obtained his diploma illegally from a defunct medical college of this city, and the Society proposes to test the section of the act which relates to false swearing. Another remarkable diploma was issued from the American University of Philadelphia (Buchanan's diploma mill), on the 4th of July, 1876, palpably illegal. The owner, one "Dr. Grindle," has been arrested, and is held to explain why he has not had his diploma endorsed according to law, coming as it does from a school without the State. After that he will have a chance to tell how he happened to graduate on the National holiday. The Society evidently is in earnest, and is determined to rid New York city of these irregular and dangerous humbugs.

A NEW SOCIETY has been formed, called the Materia Medica Society, which discusses the nature and action of drugs. If anything can be predicated from the few meetings already held, the society promises to be a useful one, as the papers presented have been of a high standard, evincing a good knowledge of the subjects discussed. A novel feature is the one relating to the admission of new members. Each candidate must pre-

sent a written thesis upon some subject in materia medica as a proof of his qualification for membership, and upon that proof he is admitted or rejected. A similar rule has been in operation in the New York Dermatological Society for some time past.

BOSTON.

(From our Special Correspondent.)

THE SUFFOLK DISTRICT MEDICAL SOCIETY, which includes all members of the Massachusetts Medical Society residing in Boston, last winter dispensed with half of its monthly meetings and formed from among its members sections devoted to special branches of medicine. The sections devoted to general medicine and to surgery have held several meetings, with good attendance, and far more animated discussions than under the old plan. The section of Obstetrics and Diseases of Women will soon be formed; others will follow if the scheme proves satisfactory.

A MEDICAL MAYOR.—Dr. Samuel A. Green, city physician of Boston, has received the nomination for mayor of both the Republican and Citizens' Conventions. This conjoint action will, it is believed, ensure his election despite the fact that the Democratic candidate generally carries the election by a small majority.

HARVARD MEDICAL SCHOOL.—The new building for the Harvard Medical School has reached the third story. The work will probably be stopped for the winter on December 1st. The fund raised for the erection of the building amounts to $300,000.

The total number of students enrolled this winter is 243, divided as follows: Graduate's Course, 9; Fourth Class Course, 10 (optional); Third Class Course, 80; Second Class Course, 63; First Class Course, 81.

Prof. Calvin Ellis, Dean of the Faculty, who has been incapacitated by ill health from lecturing or practising for nearly a year, is reported to be convalescing.

BALTIMORE.

(From our Special Correspondent.)

THE BACILLUS LEPRÆ.—The recent descriptions of Neisser, Eklund, and others, of the bacillus lepræ, first observed by Hansen, have awakened widespread interest in the pathology of leprosy. Dr. I. Bermann, of this city, has been able to detect the presence of the bacillus in leprous tissue, and to confirm the discoveries of the above-mentioned authors. Sections exhibiting the bacillus were shown at the recent meeting of the American Dermatological Association at Newport. Since then, Dr. Bermann has improved his methods of preparation and investigation, and is now able to demonstrate the bacillus to perfection. His results were shown at a recent meeting of the Baltimore Clinical Society. The directions given by Neisser for detecting the little organisms enable one to recognize them, but not with satisfaction. Weigert's methods for investigating bacteria answer the purpose perfectly. The affinity of the bacillus lepræ for the aniline violet staining fluid is remarkable. By immersing the stained sections in oil of cloves for forty-eight hours, the violet color is removed almost completely from the tissues, leaving the bacilli stained dark purple and presenting sharp outlines. It remains very difficult to see them, however, even after this preparation, and objectives of high power (with small angle) must be employed. By using, as a condenser, an objective of about one-quarter inch, for illumination, they come out with splendid definition. The bacilli are mostly to be found in the protoplasm of the cells, but may be seen elsewhere. Sections thus prepared and examined will satisfy the most incredulous. Dr. Bermann has been the first in this country, we believe, to detect the bacillus, and will shortly publish his observations in full.

CHARLESTON.

(From our Special Correspondent.)

SCARLET FEVER, after a reign of several months, has wholly departed from this city. Diseases like this are more infectious than contagious. They do not come, stay, or go away by accident. When the scarlet fever disappeared, it was not that it had no more fit subjects to infect; there were constantly fresh arrivals of new children for it to seize upon. Diphtheria has been here much longer, and has not yet left us, as an occasional case testifies. There must be *plus* the infecting poison, without which scarlet fever, diphtheria, small-pox, or measles cannot exist, some climatic, telluric or barometrical condition which is equally essential to their life. Small-pox once remained in this city for more than two years, then it disappeared. Once we had no diphtheria here at all, till it came from California through Kentucky, Virginia and North Carolina, and was seen first in the upper counties before it travelled to Charleston. We had *membranous croup* before diphtheria. Scarcely a case (we know of but one) of the former has been seen since the war.

There is a parish (St. John's, Berkley), only forty miles from this city, to which, so far as we can learn, a case of diphtheria was never yet conveyed, if we may except an occasional case, perhaps, on its lower border on the Cooper River, which is in direct water communication with this city; and yet we have discovered that in this parish, fifteen by thirty miles in dimension, has occurred a few years since some unique and isolated examples of hemorrhagic malarial fever—a disease we have never seen or heard of elsewhere in this State.

No one has yet discovered what is that precise atmospherical condition which is necessary to the life and persistence of these infectious diseases, and which being changed or exhausted, the diseases die out. We believe, with respect to yellow fever and its mild *congener dengue*, that *ice* kills them virtually, though specimens of either disease have occasionally been with us as late as December.

Typhoid fever has certainly been a little more prevalent here than usual during the past three months, affecting persons living in fine residences near the Battery, and surrounded by comforts. This is an additional example of some atmospheric peculiarity favoring its spread, though the condition of the soil, moisture, defective drainage, infected milk, etc., may have much more to do with it than with the other diseases.

In a number of cases, five in all, we find a simple treatment, similar to that advised by Sir William Jenner, quite sufficient, namely, sponging with cold water, a fever mixture, and quinia, two grains twice a day. It is high temperature that kills, and this must be restrained, by above measures, below 103°.

NEW ORLEANS.

(From our Special Correspondent.)

PUBLIC HEALTH.—With the exception of malarial and diarrhœal affections, the city has been very healthy. The death-rate for last week was twenty-six per thousand per annum. Assuming the population to be 220,000, with 60,000 colored, the death-rate of the latter was forty per thousand per annum.

Nine cases of small-pox have been brought to the Charity Hospital for admission. One was admitted during the stage of invasion, but was sent to the small-pox hospital as soon as the eruption could be diagnosed. Nevertheless, the disease has developed itself in one of the hospital employes.

Last week, ten deaths were ascribed to malarial fever and five to dysentery. Severe malarial attacks seldom occur to persons living in populous parts of the town. It is, however, very different in the suburbs; especially,

as the situation is more remote from the river or nearer the swamps. The malarial fevers brought into the hospitals are more fatal than usual. As common in these affections, the complications occasion the increased mortality. Diarrhœa, dysentery, and pneumonia are the intercurrent diseases which bring the greatest danger to the patients. The wards of Charity Hospital are kept very nearly filled.

UNIVERSITY OF LOUISIANA.—The lectures in the medical department began November 14. The class last year numbered 220. This year it will exceed that number. It is a sad, but noteworthy fact, that since 1867, seven deaths have occurred in the medical faculty of this school.

CENTRAL NEW YORK MEDICAL ASSOCIATION.—The fourteenth semi-annual meeting of the Central New York Medical Association was held in Syracuse, November 15. The first paper read was on *Mobility of the Stomach*, by Dr. W. S. Ely, of Rochester. The doctor spoke of the difficulties encountered in diagnosticating diseases of the viscera below the diaphragm, and cited three cases, which he conscientiously referred to as "errors." In the first case he was called in consultation to confirm a diagnosis, yet was honest in his conviction, from the appearance and symptoms, and from the existence of the characteristic tumor, that the case was one of cancer of the stomach. A post-mortem examination subsequently proved the error. The stomach was very much depressed; the pylorus was two inches to the left of the umbilicus, hardened and inflamed. The swelling was produced by the gall-bladder, which was filled with gall-stones. The other two cases were equally interesting, and prove the expediency, in all cases, of making a careful examination.

After discussion of the above paper, Dr. Creveling, of Auburn, read an article on *Laryngeal Phthisis*, in which he maintained that laryngeal phthisis may be present without consumption existing elsewhere.

Dr. Ely then exhibited a hypodermic syringe revised and modified by himself, and manufactured by Tiemann, of New York. The instrument is commendable because of its compactness. The needle is inclosed in the piston, and the barrel has a close-fitting cap, which prevents the possible entrance of air or dust. The syringe is about as large as a lead-pencil.

At the afternoon session, Dr. Van De Warker, of Syracuse, read a well-written article on *The Forcible Elongation of Pelvic Adhesions.*

Dr. M. H. Brown presented a case of *symblepharon*, which was produced by the formation of cicatricial bands (scars), the result of a burn by a piece of red-hot iron. The case was peculiarly interesting from the exceptionally good result obtained from the comparatively novel operation. The first operation was performed in September. It was unsuccessful, the bands, after removal, again forming. The second operation was performed last October. It consisted essentially in removing the cicatrices from the eyeball, and so loosening the lid, cutting away the adjoining conjunctiva, and substituting a piece equal in size to that destroyed, from the conjunctiva of a rabbit. This was stitched into the wound, thereby keeping the surfaces separated, and a complete and radical cure was the result. The piece of rabbit's conjunctiva is now coursed with blood-vessels, and is as sensitive as the rest of the eye.

After a discussion on dislocation of the hip, the Society adjourned to meet in Rochester, May 17, 1882.

KENTUCKY STATE MEDICAL SOCIETY PRIZE.—The Committee on Prize Essays has offered fifty dollars for the best essay embodying the results of original experimental research or original clinical observation on the nature, mode of propagation, pathology, and treatment of scarlatina. Only members of the Society are allowed to compete. Essays must be sent in before March 15, 1882, to D. S. Reynolds, M. D., Chairman.

HONORS TO AMERICAN PHYSICIANS.—At the meeting of the Clinical Society of London, on October 14, Dr. H. J. Bigelow, of Boston, and Dr. J. S. Billings, of Washington, together with Sir James Paget, Prof. Esmarch, Prof. Volkmann, Prof. Verneuil, M. Ollier, M. Pasteur, and Drs. Pantaleoni and Mazzoni were nominated by the Council as Honorary Members of the Society, in commemoration of the meeting at London of the International Medical Congress of 1881.

SIR ERASMUS WILSON.—The Queen has conferred the order of Knighthood on Sir Erasmus Wilson, President of the Royal College of Surgeons of England, "in consideration of his munificent gifts for the support of hospitals, and the encouragement of medical study." Among his gifts to hospitals has been the erection, at his sole cost, of a wing of the Margate Infirmary, involving an outlay of $150,000. He also defrayed the expense, $50,000, of bringing Cleopatra's needle to England and setting it up on the Thames embankment, and he founded the chair of Dermatology in the Royal College of Surgeons, and endowed it with $25,000. Sir Erasmus Wilson is seventy-two years of age, and his fame as a dermatologist is world-wide.

VIRCHOW'S JUBILEE.—The greatest of the honors conferred upon Virchow, in the celebration at Berlin in commemoration of his sixtieth birthday and of the twenty-fifth year of his professorship, is the foundation of the Virchow Institute for Promoting Anthropological Studies, to be under Prof. Virchow's own direction. Seventy thousand marks were subscribed towards this project in the various European countries. The presentation was made by Prof. Bastian at a brilliant fête given at the Roth House, in Berlin, on November 22. In commemoration of the same occasion, Virchow was tendered a banquet by his former assistants, now some of the most distinguished pathologists in Germany, and a marble bust was erected in his honor in the hall of the Pathological Institute.

METHOD OF APPLYING NITRIC ACID AS A CAUSTIC.—To prevent the spreading of nitric acid when used as a caustic, Dr. Speirs recommends, in the *Practitioner*, that the part to be cauterized, as, for example, a nævus, should first be surrounded by a short glass tube or neck of a bottle, of the size of the slough desired, and then the nitric acid applied with a pipette. Before removing the tube, the excess of acid is to be mopped up with cotton-wool on a probe.

NOTES AND QUERIES.

DOUBLE FEMORAL ARTERY.

MR. HOWARD A. KELLY has observed three cases of double femoral artery, in which the femoral divided into two trunks below the origin of the profunda to reunite above the Hunterian canal. One case like that of Mr. Bell (*Anderson's Quarterly Journal, 1826*), was the subject of ligation, and to this peculiarity the man owed his loss of life. Another case was in the leg of a white man, dissected by Dr. Griffith, at the University of Pennsylvania. The third occurred in the leg of a white woman, in Jefferson College dissecting-rooms. These cases Mr. Kelly will report in detail in the January issue of the *American Journal of the Medical Sciences.*

AUTHOR OF LISTERISM.

AT the meeting of the New York Academy of Medicine on October 20, books and papers were presented which had been received from Dr. Déclat, who in them claimed priority in the advocacy of the so-called antiseptic method.

SUPRA-PUBIC LITHOTOMY.

DR. A. GROVES reports two successful cases of supra-pubic lithotomy in the *Canadian Journal of Medical Science*, for Nov., 1881.

THE MEDICAL NEWS.

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ORIGINAL LECTURES.

CLINICAL LECTURE
ON THE TREATMENT OF CLUB-FOOT.

Delivered at Bellevue Hospital.

BY LEWIS A. SAYRE, M.D.,

PROFESSOR OF ORTHOPEDIC SURGERY IN THE BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

GENTLEMEN: I fear that you will think we are never going to quit the subject of club-foot, as I have already several times had occasion to lecture to you upon this matter within the past few weeks. More cases, however, continue to present themselves for treatment, and as the deformity is one which you will be called upon to remedy more frequently than almost any other, when you begin practice, I have thought we could profitably devote another hour to its consideration.

Club-foot is of such common occurrence, and, strange to say, its treatment so little understood or practised, that I can confidently assure you, if you will but follow the instruction which I give you for its treatment, you will be able to cure a very large proportion of the cases which are brought to you, thus reflecting great credit upon yourselves as practitioners, and will rarely have occasion to send your patients to so-called specialists. Patients are constantly being sent to me for treatment from all parts of the country, from the South, East, and West, and for the simple reason that the principles of treatment of these cases are not understood. For ten years I have been trying to inculcate these principles into the minds of physicians, but they have not yet received that general adoption by the profession which I believe they merit. So soon as they do, any one of you, or any other medical man, can relieve deformities of this kind as well as I can. There is no mystery in the treatment, and nothing about it but what you can do as well as any one else; there is no specialism in it.

Talipes Equino-varus.—This young lady is seventeen years old, and presents with a very bad case of talipes equino-varus upon the right side. You will observe that the cuboid bone is subluxated so as to form a projection. With the increasing weight of the patient, the contraction of the tendo-Achillis, and the shortening of the arch of the foot by the contraction of the tibialis anticus, the deformity has been gradually getting worse, so that she now walks upon the outer border of her little toe. Walking upon the foot in this abnormal position gives the patient great pain. She states that this deformity has existed all her life. Her case is a good illustration of the importance of following the advice which I gave some years ago, namely, that the proper time to attend to deformities of this kind is immediately after the birth of the child. As soon as you have given the mother the necessary attention after the birth of the child, and before you leave the house, you should always examine the child and see if there be any deformity present. If so, you will, by thus early beginning treatment, be able, in the great majority of cases, to restore the distorted member to its normal position, so that by the time the child is old enough to walk, the foot will be in proper position to receive the weight of the body, which in itself will tend to prevent the return of the deformity.

Suppose, for instance, you find a child at birth with talipes equino-varus. Ordinarily, such cases are of paralytic origin, or there may be a spasm of the muscles producing the deformity. No matter what be the cause, the deformity is the same. If of paralytic origin, it can be replaced upon the instant without the use of much force, but will often return to the abnormal position upon letting go of it. If not of paralytic origin, considerable force will have to be expended before you can restore the foot to its normal position. The replacing of the foot is accomplished by firm but gentle manipulation with the hand crowding it towards its normal position, rotating it outward, elevating the toes and expanding the arch so as to put the plantar fascia and the tendo-Achillis upon the stretch. After doing this, you will observe that the foot becomes of a snowy whiteness, and if you were to fix it in this position, the pressure required to keep it there would be so great that it would deprive the parts pressed upon of their nutrition, and there would be sloughing. Hence, after you have held the foot in its rectified position for a few seconds, you should let go your hold of it and allow the blood to return. As soon as the circulation has been restored, you should go through the same manœuvre again, this time holding the foot in the improved position a little longer, or until it becomes whitened, and then let go of it. If the case be one of double talipes equino-varus, after you have replaced one foot and let go of it, take the other and repeat the process with that. By the time you have reduced the deformity in the second foot, the circulation in the first will have been restored, and it can be again replaced as before. This process should be repeated twenty, forty, or a hundred times, as the case may be, until you can restore the foot nearly, or quite, to its normal position without the use of much power. After you have done this, you should ascertain to what extent the deformity can be rectified without interfering with the nutrition of the foot—without the foot becoming whitened, and secure it in this position with a roller bandage. If you can completely rectify the deformity without the foot losing its normal color, it will be safe to secure it in its natural position. Unless this can be readily accomplished, however, do not try to correct the deformity at that particular sitting. The leg of an infant should be first protected with a roller bandage of flannel before applying the adhesive strip, otherwise there would be danger of excoriation of the skin. The adhesive strip is placed with one end on the dorsum of the foot, then carried to the inside, underneath, and to the outside of the foot and up the leg. Sufficient tension is put upon the adhesive strip to draw the foot into as nearly a normal position as possible, compatible with the free circulation of blood within it. It is then secured in this position with a few turns of a roller bandage. The foot should be submitted to repeated daily manipulations while the bandage is yet applied. When the bandage is removed, which should be done every one, two, or three days, as the case may be, the parts should be washed with alcohol and water, the foot restored to its normal position several times, and then retained as nearly as possible in this position with a roller bandage. After a time you can mould a piece of leather to the foot, by first making it pliable by dipping in cold water. Or a very convenient method of accomplishing this is to take one of those little wooden models of a foot and leg of about the size of that of your patient, such as are used by ladies to place inside of stockings to facilitate darning them, and mould the leather over this, securing it in position with a bandage, and allowing it to dry, after which it can be applied to the foot. You continue to rectify the deformity in this way until the child is able voluntarily to

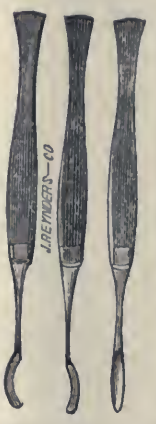
hold the foot in its normal position. As soon as the child begins to walk, the weight of its body will help to keep the foot from being displaced, and will complete the cure.

If the deformity is not corrected before the child begins to walk, pressure upon the foot in its abnormal position will intensify the deformity, and that which was at first a very slight and easily rectified abnormality becomes painful and difficult to cure. Pressure upon parts not provided with protective cushions gives rise to the formation of bursæ upon the outer margin of the foot. Further neglect may result in excoriations and sores, producing an inflammatory action, followed by reflex contraction of the muscles, which in turn, owing to their constant irritation, become structurally changed —shortened: *contractured*. When these changes have taken place, and the fibrillæ have become adherent one to another, no amount of power short of severing the diseased tissues will enable you to rectify the deformity. They must either be ruptured or divided, or, what is better, make subcutaneous section of them. Now, how are you to determine whether a muscle be contracted or contractured? To do this, bring the foot into as nearly a normal position as possible, and then apply point pressure to the part thus put upon the stretch; if reflex spasm is produced, the tendon, fascia, or muscles pressed upon are contractured, and require section in order that the deformity may be rectified.

You observe in the case of this young lady, when I put the plantar fascia upon the stretch, point pressure produces reflex spasm. The same is true of the tendo-Achillis. The inference then is, that it is useless to make any attempt to straighten this foot without first dividing the contractured tissues. As the operation is accompanied with considerable pain, it will be necessary to anæsthetize the patient. In doing this it is always essential to have the clothes loosened, so as not to interfere with the respiration. The lesson to be learned from this case is that whenever you make section of tendon, fascia, or muscle, for the relief of deformity, on that instant restore the foot to its normal position. By thus separating the ends of the divided tissue to the extent required for the correction of the deformity a space—vacuum—will be left, into which exudation will take place, and the exuded material will rapidly become organized. The old plan was to delay rectifying the deformity after the contractured tissues had been divided until the external wound had entirely closed and the inflammatory action which may follow the operation had subsided. Mechanical force was then applied and the newly-organized material exuded between the ends of the divided tissues was stretched until the foot was brought into its proper position. This stretching process was always very painful, and kept up a constant irritation, frequently resulting in inflammation and suppuration. Even after the foot was brought into its place, if the mechanical appliances were removed, it was very apt to flop back into its old position, owing to the want of power on the part of the muscles to retain it where it should be.

In regard to the knife to be used in the subcutaneous section of tissues, it is exceedingly important that it possess certain peculiarities. The handle should be so marked that you can always determine the direction of the cutting edge, though the blade be deeply buried in the tissues. The shank should be strong and well set in the handle. The blade, which should be about three-quarters of an inch in length, and either curved or straight, should be made very thick at the "back," and always rounded on the end. Most instrument-makers make their tenotomes sharp pointed, and those surgeons who use them run great risk of dividing arteries or veins, or puncturing nerves. Fig. 1 represents three varieties of tenotomes made by Messrs. Reynders & Co., of this city, for me. That which has its cutting edge upon the convexity of the blade is the one which I use almost exclusively.

FIG. 1.



I will now divide the plantar fascia, and as I do so, the part being put upon the stretch, I can hear the snapping of the fibres and plainly feel them giving way. As the knife is withdrawn, and without a drop of blood having escaped, I place a small bit of adhesive plaster over the wound, thus effectually shutting out all air. Next I will divide the tendo-Achillis. You introduce your knife flatwise and in such a manner as to make a valvular incision through the skin. The blade of the knife, still kept flatwise, is carried beneath the tendon to the opposite side, when it is turned with its cutting edge towards the tendon. The tendon is now pressed down upon the knife, while at the same time a moderate sawing motion is given to the blade until the tissues are divided. As my knife is passing through the tendon, you can hear a squeaking noise, and now, a sudden snap, indicating that the tendon is completely divided. Upon withdrawing my knife, I place a piece of adhesive plaster, as before, over the site of the incision, and then proceed, by manual pressure, to bring the foot into its normal position.

We are now ready for the application of the foot-board. The foot-board which I shall use in this case, and would recommend to you in all similar cases, is of very simple construction. It consists of a thin piece of board an inch or so longer than the foot, shaped somewhat like the sole of a shoe, but made narrow at the heel and broad at the toes. A strip of adhesive plaster, about an inch or an inch and a half wide, and long enough to pass over the instep and down underneath the board again, is placed with its middle part against the heel of the board, and a longer and broader strip of adhesive plaster, placed lengthwise of the board, beginning at the toe-end underneath, is passed back over the heel to the under side of the board and brought forward to the toe-end. The board is now padded, under the adhesive plaster, with cotton on the side which is to be placed against the sole of the foot. A firm bandage is applied over the adhesive plaster, and holds everything in place. The board is now ready for use. The malleoli and other bony prominences are protected from undue pressure by a liberal use of cotton, and the board is placed in position upon the foot. The foot is first brought to a right angle with the leg, and the two ends of the heel-strap are then brought forward, crossed over the instep, and passed to the under side of the board. It is necessary that the foot be placed at right angles to the leg before this is done, otherwise there would be danger of obstructing the circulation by making undue pressure with the adhesive strap. The foot is now securely fastened to the board by a roller bandage. The next step is to bring the broad strip of adhesive plaster attached to the toe-end of the board up against the front part of the leg, making sufficient traction upon it to retain the foot at a right angle to the leg. It is then secured with a few turns of the roller bandage, and the dressing is complete. Sometimes it is necessary to have an additional strip of adhesive plaster extending from the inside or outside of the foot to a position upon the leg, according to whether the foot is turned to the outside or inside. This dressing is much simpler than Stromeyer's foot-board, is inexpensive, and fulfils all the indications to be met. No complicated or expensive apparatus is required. The most important and most difficult part of the whole dressing

to procure is a good quality of adhesive plaster. This case was discharged at the end of six weeks from the hospital without deformity, and able to flex the foot voluntarily to more than a right angle. Was exhibited before the class December 14, 1881, before leaving the hospital.

The same principles which have been applied to this are applicable to any other form of club-foot. Of course, you will not be able to relieve all cases, but the earlier you begin treatment, the better will be your chances of effecting a cure. It is sometimes very difficult to restore the function of the muscle. Very often, if the case be left until adult life, the bones of the foot will have become so altered that it will be impossible by this means to rectify the abnormalities of bony structure. Thanks, however, to the efforts of Prof. Lister, we are now able to deal very successfully even with this class of cases. Under the antiseptic spray we can cut directly down upon the bone with perfect freedom and safety, remove a wedge-shaped piece, and restore the foot to its normal position, an operation which only a few years ago was entirely impracticable.

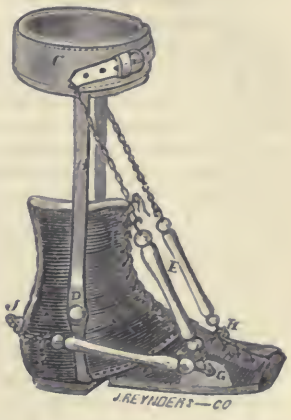
Talipes Equino-varus—Section of Plantar Fascia and Tendo-Achillis—Hudson's Shoe—Rapid Progress towards Recovery.—I merely asked this little girl to come to the clinic to-day in order that you might see how rapidly these deformities can be rectified. The deformity which existed was a perfect duplicate of that of the young lady which you have just seen. The only difference between the two cases is the age of the patients—this one being seven years old and the young lady seventeen. It lacks two days of being three weeks since I operated on this little girl. She is now able, as you see, to stand with her heel upon the floor. I operated upon her in exactly the same way as I have upon the young lady—making section of the plantar fascia and tendo-Achillis subcutaneously, and dressing the foot in the manner I have already shown you. At the time of the operation there was no loss of blood whatever. The healing of the wound was completed without the formation of a drop of pus, and after ten days she was able to make traction with her tendo-Achillis; but she could not, nor can she now, voluntarily flex her foot on account of the paralysis of the muscles on the front part of the leg. Having rectified the deformity, we have now to cure the disease, namely, the paralysis of the muscle. Do not make the mistake of thinking that when you have reduced the deformity you have cured the disease. Not until the function of the muscles has been restored to such an extent that they hold the foot in its normal position should the case be discharged as cured. To this end the muscles should have the benefit of daily massage and the application of electricity. The injection of a solution containing one-eightieth of a grain of strychnia, directly into the paralyzed muscles, is often of considerable service in restoring them to their function. This can be done by means of a hypodermic syringe, and may be repeated every ten, twenty, or thirty days, according to circumstances, until the muscles have recovered their power and the foot is held in its normal position by them without other mechanical aid. Until then no cure has been effected.

FIG. 2.

This little girl you see is wearing a shoe (see Fig. 2), to the sole of which is fastened two iron rods jointed at the ankle and running up on either side of the leg to the top of the tibia. At the upper end a padded band encircles the leg, and to this are fastened little hooks, to which, in turn, are attached India-rubber muscles, which pass downward on each side of the leg. The lower end of each of these rubber muscles is furnished with a piece of strong catgut, which plays over a semi-circular wheel opposite the ankle-joint. By this means any amount of tension can be exerted upon the foot, and it can thus be readily kept in its normal position. I used to have a shoe constructed with a stirrup over the toes, to which was attached an elastic strap, extending up to the band encircling the leg just below the knee. But Dr. Hudson has devised this shoe, which I consider a very great improvement upon mine.

Talipes Equino-varus.—Here is another case of talipes equino-varus. The deformity is apparently so slight that most persons would think that no operation would be required. I see that the girl is wearing what pretends to be one of my club-foot shoes (see Fig. 3); but, on account of its faulty construction, it is of no service whatever.

FIG. 3.



The lateral movement, so important to these cases, is entirely prevented, owing to the fact that the part of the sole adjacent to the heel has not been properly made; hence the elastic side-straps are prevented from acting. This difficulty can easily be rectified by rounding off the inner and outer corners of the sole next to the heel, so as to allow full play of the orbicular joint, opposite the medio-tarsal articulation. The shoe is of such simple construction that any intelligent blacksmith, in any part of the country, could readily make it. The late Prof. Crosby devised a very serviceable and cheap substitute for my shoe in the following manner: Taking a pair of stout shoes that fitted the patient, he cut the sole of the one for the deformed foot directly in two, at a point opposite the medio-tarsal junction; the two parts were made fast to each other by means of links of a chain, and the necessary inversions or eversions produced by elastic straps.

Upon a careful examination of this patient, I find that no shoe will do her any good until an operation is performed, because the muscles and fascia have become contractured. Now, observe what takes place when I press upon the plantar fascia, after it has been put upon the stretch. You see, there is a reflex spasm; the same is true with the tendo-Achillis. Hence, I shall proceed to operate in this case as I have done in the other.

In the course of a few weeks she will be able to put on the club-foot shoe, which she will wear with advantage. Electricity, massage, and the cold-water douche should be employed to complete a cure.

One word in regard to the application of electricity in these cases. Before applying it, the deformity should be reduced, as far as possible, by means of manipulation with the hands, so that when the muscles are caused to contract by the application of electricity, they should be placed in the most advantageous position possible. If you have no battery at hand, you can cause vigorous contraction of the muscles by taking them up between your thumb and fingers, and giving them a sharp, quick pinch. Here, in this case, you see this shows very plainly; every time I pinch the muscles of the leg, you see the foot is drawn up. Returned at end of two weeks,

when tendo-Achillis was firmly united, so that she could voluntarily extend the foot. One month later was shown to class perfectly restored and wearing ordinary shoe.

ORIGINAL ARTICLES.

LITHOLAPAXY: WHAT IS ITS VALUE?

By W. H. VAN BUREN, M.D., LL.D.,
PROFESSOR OF SURGERY IN BELLEVUE HOSPITAL MEDICAL COLLEGE, N. Y.

WHEN a novelty in surgery claiming superior merit is promulgated under good auspices, it becomes the duty of those by whom it has been subjected to trial to make known the results of their experience.

Shortly after reading in the *American Journal of the Medical Sciences* for January, 1879, the paper of Prof. Henry J. Bigelow, M.D., of Harvard, on the operation which he has styled "litholapaxy," or lithotrity completed at one operation, I subjected a patient with stone to the new process. The favorable issue of this case led me to repeat the new operation upon the next case that offered; this was also successful; and it so happens that since that date I have had occasion to employ, or to advise, no other operation for stone in the adult.

I have been led to this course by the simple fact that the bladder has invariably shown the unexpected and entire tolerance of the prolonged operation which Prof. Bigelow was the first to demonstrate that it possesses, when properly managed.

In thirty-four cases in which I have been more or less immediately concerned since January, 1879, no stone has been encountered, although the majority were of considerable size, which could not be grasped and crushed by the lithotrite; and in no instance has there been a failure to free the bladder from stone in a reasonable time at one operation. Of these thirty-four cases in which the lithotrite has been used by myself, Dr. Keyes, or Dr. L. A. Stimson, singly or conjointly, thirty-three have resulted in reasonably prompt and satisfactory cure. In the solitary fatal case there was pre-existing suppurative inflammation of both kidneys, masked by the aggravated sufferings of the patient, and suspected, but not certainly made out. It was evidently not a fit case for this or any other operation.

In one of the latest cases, an otherwise healthy man of sixty-eight, who applied to me for bladder disease of long standing, not knowing he had stone, the unusually large amount of ten hundred and sixty-five grains of dense brown urates were removed in seventy-five minutes. There was but one stone in this man's bladder, and its grasp was over an inch and a half. The patient was up and about within a week.

In the latest case, a man of seventy-five, with quite a large prostate, four hundred and fifty-three grains of phosphate stone were removed in sixty-five minutes, and the bleeding (from the prostate) was unusually profuse; but there was no chill, and the sequelæ were favorable. In these cases the operation was done entirely by Dr. Keyes.

The cardinal feature of this operation, which explains the remarkable absence of after ill effects, is that the bladder, relieved from the presence of a foreign body in its cavity, is left at rest, and free from any cause of further irritation. In this respect it shares the great advantage of lithotomy.

In less than a third of the cases the catheter has been required for a day or two after the operation; but the subsequent atony of the bladder, which we had been led to anticipate from the experience of ordinary lithotrity, has been conspicuously absent. In fact, in no case which has passed within my cognizance, have there been any symptoms showing other than complete tolerance on the part of the bladder under gentle and judicious manipulation, and entire absence of bad effects afterwards.

In a certain proportion of the cases in which there has been chronic cystitis previous to the operation—say one in six or eight—the patients have continued to form phosphatic gravel in the bladder from time to time; but this tendency has been antagonized by systematic washing out by means of the fountain syringe.

The youngest of our patients subjected to litholapaxy was a boy of nineteen. In children I am not prepared to advise this operation, although the instruments we have employed are not larger than the ordinary lithotrites. But in view of the narrowness of the urethra before puberty, and of the fact that I have never lost a child after lithotomy in between thirty and forty cases, I should give preference to the knife.

Cases of stone will doubtless occur in which urethral stricture or rigidity may prevent the employment of large evacuating tubes so desirable in the new operation, or in which a patient's feebleness may render it necessary to cut short the proceedings before the bladder has been entirely cleared out, but these must be exceptional.

From my experience of the last three years, I judge that the operation of lithotomy, except in children, bids fair to become a somewhat rare and unusual proceeding, in the presence of a safer and equally efficient remedy.

Let us give due credit, then, to Bigelow's original improvement in the treatment of stone in the bladder, which, unless I am in error, promises to add great honor to American surgery.

No. 1 PARK AVENUE, NEW YORK.

THE PRACTICAL EXAMINATION OF RAILWAY EMPLOYÉS,

AS TO COLOR-BLINDNESS, ACUTENESS OF VISION AND HEARING.

BY WILLIAM THOMSON, M.D.,
PROFESSOR OF OPHTHALMOLOGY IN THE JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

AT the conclusion of the International Medical Congress last August, in London, but two subjects were thought so important as to be desirable to be brought before the Congress for its official sanction as the voice of the entire profession. Resolutions were adopted, 1, strongly urging the necessity of vivisection in advancing medical science and art; and, 2, strongly urging upon the various governments to appoint delegates to an international commission to

agree upon tests of sight suitable to be enforced in the case of signallers and look-out men and such, by land or sea, with a view to the safety of life and property. This resolution emanated from the Ophthalmological Section, and was drawn up by a committee consisting of the following persons, all of whom had made themselves conspicuous by their studies upon this subject, and by their labors to effect this reform by appeals to the authorities of their various nations: Chairman, Prof. Donders, for the Netherlands; Mr. Wm. Bowman, for Great Britain; Dr. Dufour, for Switzerland; Dr. Gama Lobo, for Brazil; Dr. Samuel T. Knaggs, for N. S. Wales; Prof. Leber, for Germany; Dr. Libbrecht, for Belgium; Dr. L. Maréchal, for France; Dr. Ole Bull, for Norway; Dr. Osio, for Spain; Dr. Reymond, for Italy; J. T. Rudall, F.R.C.S., for Victoria; Prof. W. Thomson, for the United States; Dr. Warlomont, for Belgium; Secretary, Dr. Brailey, London.

That no wide control has as yet been obtained is shown by the need for further action advised by the Congress; but the discussions, and an acquaintance with the schemes that had been and were then proposed, convinced me that one of the main difficulties has been found in the need of some more simple method for determining the color sense, since all those now before the profession demand the presence of special or medical experts of high culture to pronounce upon the individual applications of the test, and specialists of this type are not abundant in any country.

In the hope that a common standard for land and sea, which would give a qualitative as well as a quantitative test for color sense, might come into general use, the committee will recommend the iso-chromatic tables on the principle of Stilling, consisting of squares of confusion colors and test colors intermingled so as to form letters, but which will be found too complicated to be trusted to any but trained examiners of special educational fitness, or, in other words, medical men acquainted with the diseases and defects of the eye.

The European idea seems to be to propose to the governing powers an organization composed of medical experts in sufficient number, who shall personally examine the railway employés under the direction of some one or more eminent ophthalmic surgeons, to be paid by the government, to establish a standard for sight and color sense, and to give or withhold certificates which will entitle the men to remain in or leave the service. From the failures to secure this control it may be inferred that opposition has been successfully made by the railways, or that the persons in authority have not been convinced of the practical value of the schemes. No steps have yet been taken in England, and it is felt that there, as in this country, no amount of agitation would suffice to bring the railways under such legislation.

Upon the conclusion of the labors of the committee, the plan described below was briefly mentioned as the one most feasible in our country, and much interest was shown in it, and in the instrument for the use of the detection of color defects; and it was agreed that with it any properly instructed non-medical person could make the first examinations, and transmit the results for the decisions of a medical authority; and that large bodies of men might thus be safely passed through the testing without the presence of medical examiners. One member of the committee has already sent to me for the instrument, with the statement that he will advise his government to employ it on the railways; and another instrument has been sent through the British Consul at Philadelphia, at the request of the Secretary of the Marine Department, for the use of the Board of Trade in London.

In giving, then, the details of the system for examination into the "sight, color sense, and hearing," which was prepared by me for the Pennsylvania Railroad, and perfected by the aid of a committee of their transportation officers, and which has been adopted, I feel that a decided step forward has been made, and that the ideas which underlie it are substantial, viz., 1. That it would be impossible by any agitation to subject a road passing through many sovereign States to legislation which might be considered hostile to its interest. 2. That for the protection of lives and property any road would gladly accept the aid of scientific advisers when offered in a practical form.

The signal failure to carry out State legislation obtained by public agitation in Connecticut, under which scientific experts, designated by the Governor, and paid by the road, were provided for; and fixing severe penalties for the employment of any man not provided with experts' certificates, proved that the officers of the roads were not willing to submit their employés to the scrutiny of State officials who, adopting their own standards, could practically summarily discharge perhaps fifteen per cent. of their men, disturb the discipline and impair the organization of their roads; whilst the political power of a large number of such employés, each with a ballot, was fully demonstrated in their successful demand for the repeal of this law. Any advice on this subject to be accepted by the railway officials ought to be given by scientists of their own selection, and must be confidential, in order that they may either discharge men unfit for service, or transfer to positions where they can do no harm those who by education are too valuable to be lost to their service; whilst the men would gladly accept any wise precautions against the dangers of their occupation which could be provided for their own safety.

These difficulties are overcome by the employment of the instructions which I have prepared for the use of the Pennsylvania Railroad, and which can be followed by a non-medical person, properly instructed, who will place the results on a blank, and transmit them to the professional expert having supervision of the entire examination. From these data a just decision can be made as to the sight, color sense, and hearing of each employé.

In accordance with a wish expressed many months ago, that I should suggest some practical method for the examination of the employés of the Pennsylvania Railroad, as to their ability to see the colored signals by day and night used in the service, I de-

voted much time to the subject, in an effort to overcome the following difficulties:

1. To ascertain whether each man possesses *sight* enough to see *form* at the average distance; and *range of vision* to enable him to see near objects well enough to read written or printed orders and instructions. 2. To learn if each man has color sense sufficient to judge promptly, by day or night, between the colors in use for signals. 3. To determine the ability of each man to hear distinctly.

The difficulties to be overcome were found in the magnitude of the task, involving the examination of thirty-five thousand men now in the service, with the necessity of extending it to all who may be hereafter employed, distributed over thousands of miles of road; and in the absence of professional experts in sufficient number, possessing enough special training to fit them to decide with precision the points in issue.

It soon became apparent that some system would be needed that could be put in force by each Division Superintendent, acting through an intelligent employé, under the general supervision of one or more ophthalmic surgeons of recognized skill, to whom all information collected could be transmitted, and who would be able to decide all doubtful cases, and thus protect the road from any danger arising from incapable employés, and save good and faithful men from the evil of being discharged from the company's service, or prevented from being employed on other roads, on insufficient grounds.

It was believed that the facts could be collected by non-professional persons, and could be so clearly presented to the Division Superintendent and to the professional expert, as to enable a perfectly correct decision to be made in every case; and that men fit for service would be recognized, whilst those deficient in sight, color sense, or hearing, could be referred to the expert if they so desired, or transferred to places in the service where their defects, if not remediable by treatment, could do no harm either to the road or to the public.

Such a system was submitted to the General Manager of the Pennsylvania Railroad some months ago, and has been perfected by the labors of a special committee of the Society of Transportation Officers in conjunction with the writer. The entire method has furthermore been submitted to a practical experimental test extending over nearly two thousand men, employed as conductors, engineers, firemen, and brakemen, and the results have satisfied the committee and myself that our object has been fully attained, and that the system proposed may now be put in force with confidence in its practical utility. As an evidence of this, I may cite two complete detailed reports, including 1383 men in all. The blanks upon which the original entries were made, have all been submitted to me, and they satisfy me that the results in the summary of each of these excellent reports may be confidently accepted, and thus we have become acquainted with the fact that there were in the service of the Pennsylvania Railroad, of the 1383 men examined, 246 men deficient in the full acuteness of vision, 55 absolutely color-blind, and 21 defective in hearing.

In one of the reports, an examination not included in the instructions from the committee, was made with colored flags and colored lights by night, and 13 men failed to be able to recognize them from a total of 24, who were color-blind to the test used for its detection, but I have little doubt whatever that the entire number of color-blind, viz., 55, would also fail under a carefully-devised system of tests by the usual railroad signals.

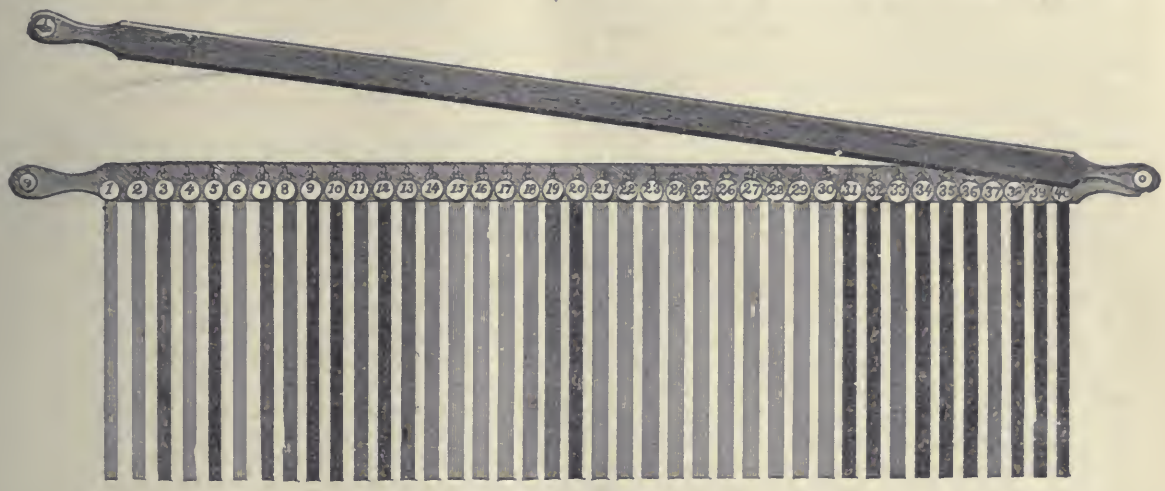
The entire number reported as *defective* in color sense, $4\frac{2}{10}$ per cent., is up to the average, as reported by the best authorities in its percentage; but those absolutely color-blind, and hence unable to distinguish between a soiled white or gray and green, or a green and red flag, are fully 4 per cent.; and this proves that the instrument employed in this part of the examination has met our expectations fully.

As this was the point about which I had most doubt, a word or two of explanation may be proper, more especially as many great authorities declare that no examination for color-blindness should be accepted, unless made by professional specialists.

The examination for color-blindness now generally accepted and proposed by Prof. Holmgren, consists in testing the power of a person to match various colors, which are most conveniently used in the form of colored yarns. Usually about 150 tints are employed, in a confused mixture, and three test colors, viz., *light green*, *rose* or *purple*, and *red*, are placed in the foregoing order before the person examined, who is directed to select similar colors from the mass. The examiner sits then in judgment, and decides whether the color sense is perfect from the selections made, or from those *not* made, or from them both, and from the prompt or hesitating manner of the examined. It has been our effort to render this more simple, and to so arrange the colors that they may be identified by some number, so that an expert, although absent from the scene, would know by these numbers the exact tints selected, and thus be fully competent to declare from them the color perception of any person whose record had been properly made. From theory based upon scientific knowledge, and from much experience, I was able to arrange an instrument that would have the real colors, and those usually confounded with them, "confusion colors," placed in such relations to each other, and so designated by numbers, as to make an examination for color-blindness possible by a non-professional person, who could conduct the testing, record it properly, and transmit it to an expert capable of deciding upon the written results. Hence there is no departure from the system of matching tints already established, the only novelty being in reducing the number of colors to those similar to the test colors, and to those usually chosen by color-blind persons, and so identifying them as to enable an absent expert or superintendent to know precisely what colors had been selected to match the test colors.

The theory of the instrument (consisting of a stick with the yarns attached, see Figure), is that color-blindness is most promptly detected by using the *light-green test-skein*, and asking that it be matched in color from the yarns on the stick, which are arranged

to be alternately green and confusion colors, and are numbered from one to twenty, the person being directed to select ten tints, and the examiner being required to note the numbers of the tints chosen. It will be seen that the odd numbers are the green, and the even ones the confusion colors, and, that if a person has a good color sense, his record will exhibit none but odd numbers; whilst, if he is color-blind, the mingling of even numbers betrays his defect at a glance to the supervising expert or superintendent.



There are forty tints on the stick, and the first twenty are given to the detection of color-blindness, using the *test-green*, and if the color sense is deficient, it will surely be revealed.

To distinguish, however, between green-blindness and red-blindness, the *rose-test* is used, and those color-blind will select indifferently, either the blues intermingled with the rose, between figures 20 and 30, or perhaps the blue-green or grays from 1 to 20, and thus reveal their defect, and establish either green- or red-blindness.

Finally, the *red-test* corroborates these results, and satisfies the most sceptical of color defect, when the "confusion tints" or even numbers between 30 and 40 are selected.

On a suitable blank these figures are placed in the order of examination, and a glance of the eye reveals the color sense of the person examined; since, if anything but odd numbers are chosen, there is a defect; or if, with test one, anything beyond 20 is chosen; or if, with test two, anything but odd numbers between 20 and 30; or, with test three, anything but odd numbers between 30 and 40. The colors can readily be changed in the instrument, if it should be found desirable.

It is theoretically and practically a fact, that the tints as arranged on the instrument look quite the same in color to color-blind persons, and that those having a perfect color sense can thus form an idea of this infirmity. If, then, green and gray are indistinguishable, and green and red, when of the same depth of color, seem to be entirely the same to the color-blind, it needs no opinion from a scientific expert to convince the manager of a railroad that it would be most dangerous to place the lives of people under the guidance of an engineer who could not distinguish, if green-blind, between a soiled white and a green flag, or between a green and red flag, or other signal of these colors.

It is a fact that some of the color-blind promptly give the proper names to the flags, and answer correctly, when asked, what they would do in presence of such signals but it must be remembered that they may see perfectly, and have always had some perception of these colors, and do give them their conventional names, perhaps, but that they are unable to distinguish them at once and infallibly, and that it will only require a further extension of our method of testing to demonstrate the inability of persons color-blind to our examination to recognize the signals, by day or night, which are now depended upon to prevent accidents of the gravest character. This must be done by demanding that the signals be matched, and not named, and is incorporated in the instructions herewith submitted, so that the tints which color-blind men select with the railroad signals, may hereafter be known and recorded.

My conclusions from a study of the subject in connection with the railway service are:

1. That there are many employés who have defective sight, caused either by optical defects, which are, perhaps, congenital, and which might be corrected with proper glasses, or due to the results of injuries or diseases of the eyes, remediable or not, by medical or surgical treatment.

2. That one man in twenty-five will be found color-blind to a degree to render him unfit for service where prompt recognition of signals is needed, inasmuch as color-blindness for red and green renders signals of these colors indistinguishable. It is a fact in physiological optics, however, that yellow and blue are seen by those color-blind for red and green, and that yellow-violet blindness is so rare that it might lead to the use of these yellow and blue colors, in preference to red and green, wherever possible.

3. That color-blindness, although mainly con-

genital and incurable, is sometimes caused by disease or injury, and that precautions might be needed to have either periodical examinations or to insist upon it in cases where men have suffered from severe illness or injury, or when they have been addicted to the abuse of tobacco or alcohol.

4. That the method, when adopted, will enable the authorities to know exactly how many of their employés are "satisfactory in every particular" as to sight and hearing; and that the examination will have the further value of making the division superintendents acquainted with the general aptitude of the men in their divisions as to general intelligence.

5. That the entire examinations can be made at the rate of at least six men an hour; whilst that for color sense alone can be done in a very few minutes for each man by an intelligent employé.

6. That to secure the confidence of the employés, and of competent scientific critics, as well as of the public generally, it is advisable to have some official professional specialist to whom all doubtful questions could be referred, and who should be held responsible for the accuracy of the instruments, test cards, etc., to be put in use, and who should have general supervision of the entire subject of sight, color sense, and hearing.

7. That from the impossibility of subjecting the immense number of employés on our large railways to the inspection of the few medical experts available, and to secure the examination of those hereafter to be employed, some system of testing by the railway superintendents has become a necessity, and it is believed that the one prepared will answer the purpose.

By request, these views were communicated to the proper officials of the Pennsylvania Railroad Company, and on July 1, 1881, I received a communication from the General Manager, from which I make the following extract:

"DEAR SIR: I beg leave to inform you that the apparatus invented by you, and the rules and regulations entitled 'Instructions for examinations as to vision, color sense, and hearing,' prepared by a committee of transportation officers of the Pennsylvania Railroad and yourself, for the use of our officers in examining employés for defects of sight and hearing, were laid before the Board of Directors, who approved and adopted them, and authorized me to put them into effect, subject to such changes from time to time as experience may prove to be necessary for the proper working of the system.

"In putting these rules into effect, I take pleasure in designating you as the expert to whom, under the rules, such cases shall be referred as may require the judgment of an expert."[1]

A CONTRIBUTION IN REFERENCE TO THE TREATMENT OF COMPOUND FRACTURES OF THE LEG.[2]

BY ERSKINE MASON, M.D.

HAVING been interested lately to arrive at a knowledge of the usual period of time required for the repair of a compound fracture of one or both bones of the leg, as well as the method employed which seems best to answer the indications of treatment, as well as add to the comfort of patients in the majority of cases that pass under our observation, I was led to study the result of my own experience with these cases.

I find, that though a large number of these cases have passed under my observation, I am only able at present to gather complete notes of thirty cases from the time of accident to the period of their discharge. These cases have been selected from hospital practice, and represent all the varieties and various features, both as to constitution of patient and character and cause of accident, that the surgeon meets with in his ordinary hospital service. From my recollection of other cases that have been either entirely or partially under my observation and treatment, the results are about the same as those obtained from the analyses of the thirty cases.

I think I have made use of almost every kind of splint and variety of dressing in the treatment of these cases, and I have come to the conclusion that the plaster-of-Paris dressing in some one of its varieties, but chiefly the plaster bandage, with or without brackets, meets the indications in the majority of cases, either applied at once or later on in the case, better than any other appliance I have resorted to. I am well aware of the dangers which may arise in its use, but to those who are accustomed to its application, and with the requisite care and watchfulness that these cases require, I think the risks are slight and may be avoided.

The objections that some have raised as to the want of cleanliness, from the discharges flowing beneath the bandage, I believe are preventable, and when suitably bracketed, may be adapted to almost every case.

Where from various causes it would not be advisable to use the permanent dressing at once, in my hands no apparatus has seemed to give more comfort to the patient than the fracture-box, with the limb surrounded by bran, as first used, I believe, by Barton.

Though much that has been said in favor of plaster dressings may be applicable to other permanent dressings; still, the ease with which the plaster bandage is applied and fenestra cut in it, causes me to give it the preference, as well as the ease in this dressing with which the antiseptic treatment may be employed.

Some months ago a plan was adopted by some of our hospital surgeons of wrapping the leg up in large quantities of either carbolized or salicylized jute in addition to the ordinary Lister dressings, but without any other support to the limb. Though these dressings were to be removed as seldom as possible, still the changes in some had to be made frequently, at least for the first week or ten days of treatment. I have not only had the opportunity of observing this practice in the patients of others, but have given it a trial myself in several cases. It has been abandoned by me, however, for the following reasons:

The bones are not given that steady support which I believe they require.

[1] The official instructions will be found under the head of "Notes and Queries," p 59.

[2] Read before the New York Surgical Society, Nov. 22, 1881.

Each dressing entails unnecessary pain, no matter how carefully the limb is handled.

The wounded limb is kept at times too long from observation, and burrowing of pus quite extensively has taken place before it was detected.

At times so extensively bathed in pus have I noticed the limb, that though it be aseptic, I cannot but think it is prejudicial. This dressing gives to the limb too much of the appearance of being enveloped in a large poultice; if, indeed, it does not act as such.

Finally, by the bones not being firmly supported, there is more or less motion between the fragments taking place during the changing of the dressings and various movements of the patient. This I have seen cause secondary hæmorrhage, and in one case I am cognizant of, I fear was the cause of hæmorrhage which proved fatal.

With reference to the plan of treating these cases by through-drainage, as lately described by Dr. Markoe, I possess full notes of but four cases, though I have used it in other cases whose complete histories I regret I do not possess. In all these cases, I used it in connection with the plaster splint. From the results it has furnished in my hands, it has become a favorite mode of treatment with me.

Within the past few months, two cases have been more or less under my observation where the old practice of sealing the wound was employed. The sealing, however, was done by means of protective and Lister's dressing employed, and the limb firmly bandaged. In one case the bandage used was of rubber. The limbs were then securely fixed in a fracture-box. Both tibia and fibula were broken in each case. The ages of the patients were forty-five and thirty-three years. In one case the fracture was caused by a heavy piece of timber falling upon the limb; in this instance there was a great deal of subcutaneous laceration, and there were two openings leading to the fractured bones, situated about three inches above the inner malleolus. The wound was dressed August 29, soon after the receipt of fracture. September 2 the elastic bandage was removed, and considerable pus found beneath the dressings, with two or three blebs on either side of the ankle. The limb being washed with a solution of carbolic acid, the same kind of dressings was applied, save the rubber bandage. September 16, Lister dressing was removed; wounds found closed; limb allowed to remain in the fracture-box until October 6, when it was placed in plaster, and the patient permitted to go about. With respect to his temperature, it was 100° on the evening of the first day; on the evening of the second day it was 101°; after that it was normal throughout the treatment of the case.

In the other case, the fracture was produced by the kick of a horse. There were two wounds about two inches above the external malleolus, the laceration of soft parts was less than in the previous case. The case came under treatment shortly after receipt of injury, on August 27. But one dressing (Lister) was used; this being removed September 15, and the wound found closed. October 4 a plaster splint was applied, and patient allowed to move about. In this instance there was no rise of temperature.

I have met with the same gratifying result from this treatment in two cases of fracture of the femur occurring in boys, and in one case of both bones of the fore-arm in an adult, but in these cases the injury to the soft parts was but slight. I merely allude to these cases, however, as I propose to confine my remarks to fractures of the leg.

The two cases whose histories I have given were certainly such as I of late have been accustomed to treat with drainage-tubes introduced at the first dressing; and I watched their progress with much interest. They certainly have gone far to confirm what my observations have for some time been leading me to entertain, namely, that at present we are apt to be too free in the use of the drainage-tube in these cases, at least we resort to them too freely in many cases immediately upon the receipt of injury. We introduce them to anticipate the burrowing of pus, and to remove as expeditiously as possible the discharge we expect to take place. Whereas the presence of these very tubes, when too freely used, I feel sure, at times have by their presence in the soft parts invited the secretion of pus, and kept up the discharge which we desire to avoid. Certainly, I have seen two and three tubes introduced at once where I feel certain that one for the present would suffice; if indications for more arise they may be introduced later without detriment to the case.

We never can be sure if the discharge will burrow, nor the direction it will take; hence, I think at first we should be moderate in the use of the tubes.

One other point with reference to drainage-tubes. I fear that in many instances we allow them to remain too long, and, acting as foreign bodies (which they are), tend to keep up a discharge, and delay the conversion of a compound into a simple fracture. Again, when left in a long time, their tracks through the soft parts acquire callous walls, which sinuses after the removal of the tubes are long in closing.

Experience has taught us all, I believe, that since the introduction of antiseptic measures we are now enabled to save limbs that before would have been condemned to amputation. Observation, however, has shown me that we may have too implicit faith at times in the efficacy of antiseptics, and that we may attempt to save limbs which more judicious judgment, as results have proved, should have been condemned, or save limbs which are of no service to the patient, and subsequently have to be removed.

Of the thirty cases of compound fracture of the bones of the leg, we find sixteen of the tibia, three of the fibula, while of both tibia and fibula there are eleven. Seven of these cases required amputation. Of primary amputations there were five, three of which recovered, while two died—one from delirium tremens, the other from erysipelas and alcoholism. Of secondary amputation there were two cases. Both recovered.

Eighteen of these cases were treated in plaster-of-Paris dressings—either by the bandage alone or else strengthened and assisted by brackets, as the cases seemed to require. Nine of these cases were put up in the permanent dressings at once, and nine

after the lapse of some days after the injury, the average being about the twenty-fourth day.

In those cases where the apparatus was applied immediately, the average day of its removal was the twenty-fourth; while in those cases where there was necessary delay before plaster could be used, the average period of removal was the thirty-eighth day.

In those cases where the splint was applied after the lapse of some days, we find, in several instances, it had to be removed and reapplied. The causes for which we find to be in one case the splint being too loose, one from pain, one from ulceration, one from unpleasant odor arising from the splint, one from erysipelas, and one from no union.

Among these eighteen cases we find four deaths.

One from pyæmia on the eighth day. This fracture was caused by a heavy weight falling upon the upper third of the leg. Hæmorrhage was severe, and only arrested by compresses of cotton with persulphate of iron. Pulsation in both tibials was felt at the foot. Gangrene set in on the fifth day, rapidly extending, so as to involve the whole thigh.

One from shock and repeated hæmorrhages, traumatic delirium. Died on the fourth day.

One from alcoholism. Death on the seventh day.

One from erysipelas. Death on the sixty-first day.

The length of time that these patients were under treatment, viz., from the time of their accident to the day of their discharge, we find the average to be eighty-two days.

Four cases were treated by the method known as through-drainage (Markoe), viz., plaster bandage, drainage-tubes, and frequent washings with carbolic acid. The average duration of these cases was forty-nine days. Several other cases I have treated by the same method, and my impression is that they have all done well. Not possessing full notes of them, they are omitted in this table.

Five cases were treated upon Volkmann's posterior tin splint, with jute and strict Lister dressings. We find in these the average number of days of treatment to be sixty.

Among these five cases are recorded two deaths. One from pleurisy, pneumonia, septicæmia on the eighth day. The other of erysipelas upon the seventy-eighth day. This case, however, was not treated throughout upon Volkmann's splint. Union being delayed, this splint was changed to one of plaster. On the sixty-third day some sequestra were removed, splint reapplied, and erysipelas set in on the seventy-third day. In several of these cases fragments of bone were removed at various times.

In a large proportion of all these cases antiseptic treatment has been employed.

HOSPITAL NOTES.

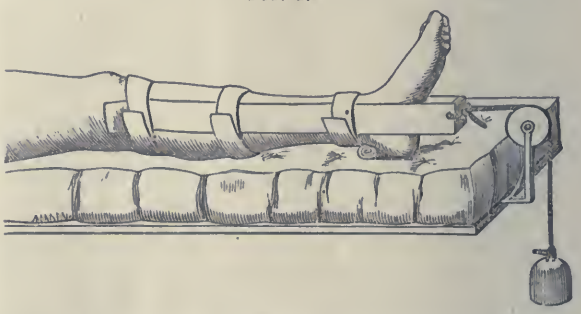
TREATMENT OF FRACTURES OF THE FEMUR IN THE HOSPITALS OF PHILADELPHIA.

(Reported by H. R. WHARTON, M. D.,
SURGEON TO THE CHILDREN'S HOSPITAL, PHILADELPHIA.)

IN the treatment of fractures of the femur, in the hospitals of Philadelphia, the most widely employed dressing is one which combines the principles of extension and counter-extension with lateral support. This dressing, from the ease with which the materials for its construction are obtained, from the simplicity of its application, and from the excellent results following its use, has become most popular with the surgeons of Philadelphia.

The dressing is applied as follows: The patient is placed in a firm bed, and the injured limb is kept moderately extended. A strip of adhesive plaster two and a half to three inches in width is then cut; it should be long enough to extend from just below the seat of fracture on one side of the limb, to a short distance below the sole of the foot, and then up to a corresponding point on the opposite side of the limb. In the middle of this strip a block of wood, perforated in the centre, two and a half inches in width by three and a half inches in length, is placed; another strip, of equal width and long enough to extend slightly above

FIG. 1.*



the malleoli on either side, is fastened to the inner side of the block, which may be held in position by several circular strips of adhesive plaster, forming a stirrup extending three or four inches below the sole of the foot. The block serves to spread the plaster and keep it from pressing on the malleoli, and also to furnish a point of attachment for the cord, to which the extending-weight is fastened. (See Fig. 1.)

The limb should be shaved if the growth of hair is abundant; the plaster is now warmed and applied to either side of the limb, circular strips of adhesive plaster two inches in width being then carried around the limb to fix the lateral straps; these strips are applied just above the malleoli, at the middle of the leg, just below the knee; and one a short distance above the knee. A roller bandage is next applied to the limb from the toes to the groin, and may be finished with a few spica-of-the-groin turns. This bandage gives fixation to the extension apparatus, and also, by its pressure, serves to control muscular spasm in the injured limb.

Lateral support is now given to the limb by two sand-bags, the outer or long sand-bag extending from the axilla to the external malleolus, the inner or short bag from the perineum to the internal malleolus. These bags are made of stout muslin, and when filled with dry sand should measure at least four inches in diameter.

A cord is then passed through the perforation in the block and fastened, and the free end is passed over a pulley attached to the foot of the bed. A weight of from five to twelve pounds is fastened to the cord, and the foot of the bed is slightly elevated to prevent the patient from sliding downwards. The weight of the patient's body in this dressing acts as the counter-extending force.

The dressing is usually kept on from four to six weeks; and when union is firm, it is removed and a plaster-of-Paris or binder's-board splint is applied to

* Represents the extending strips carried only to the knee.

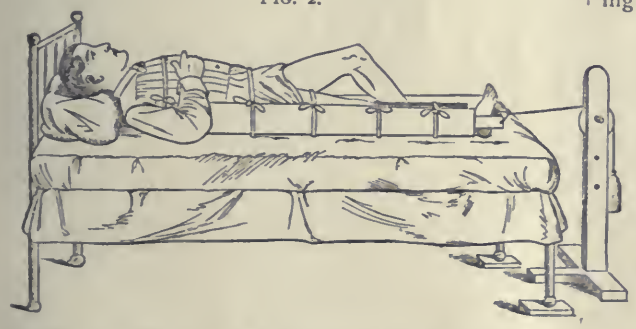
the thigh; and at the end of eight weeks the patient is allowed to leave his bed and go about on crutches. This is the dressing generally applied for fracture of the shaft and neck of the femur in the Pennsylvania, Episcopal, University, Jefferson College, Presbyterian, Children's, Philadelphia, St. Joseph's, Jewish, German, St. Mary's, and Germantown Hospitals.

Some modifications of the above dressing, though not affecting its general principles, are made by a number of the surgeons connected with the previously-named institutions.

Dr. Morton, at the Pennsylvania Hospital, uses an apparatus devised by himself for making extension. It consists of a soft leather splint surrounding and buckled to the limb a few inches below and above the knee, with an opening left for the patella; strips extend from the lower portion of this splint, and are fastened to a block below the sole of the foot, to which the extending-weight is attached; a band encircles the limb a short distance above the malleoli, which keeps the extension-strips in place.

Prof. Ashhurst, at the University Hospital, in cases of fracture of the shaft of the femur, uses the adhesive-plaster apparatus for making extension, but carries the extending-bands and surrounding bandage only to the knee, and makes lateral support by two wooden splints and bran-bags; the external or long splint extends from the axilla to the external malleolus, and the inner or short splint extends from the perineum to the internal malleolus; a splint-cloth is placed under the limb, in which the splints are wrapped; bran bags, corresponding in length to the splints, being then

FIG. 2.



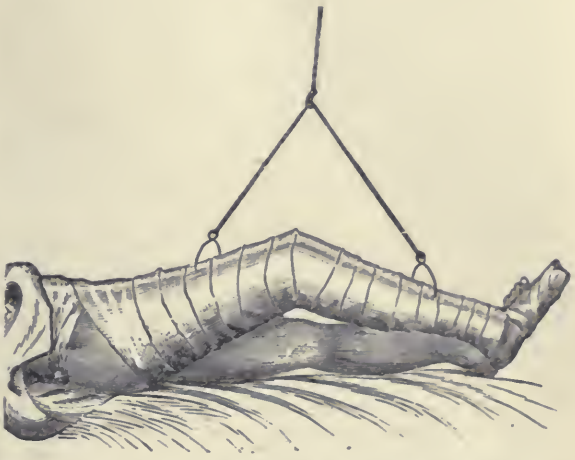
placed on either side of the limb, and the splints being brought up into position and secured by five or six bands. (See Fig. 2.) For fractures of the neck of the femur, he employs the ordinary sand-bags to give lateral support to the thigh.

Dr. Nancrede, at the Episcopal Hospital, also uses lateral splints, but carries the adhesive plaster beyond the knee to a point just short of the seat of fracture. Dr. Packard, at the Episcopal Hospital, in cases where extension does not overcome the deformity, applies over the seat of fracture, in addition to the usual dressing, short anterior and posterior splints of binder's-board, moulded to the thigh and held in place by a bandage.

Dr. Brinton, at St. Joseph's Hospital, in similar cases, uses binder's-board, or short wooden lateral splints, well padded and applied to the thigh, in addition to the ordinary dressing.

Prof. Agnew, at the Pennsylvania and University Hospitals, in fractures of the upper third of the femur, where there is an upward and inward projection of the lower end of the upper fragment, uses the anterior wire splint of the late Prof. N. R. Smith, of Baltimore. In applying this splint the limb is extended, and a spiral reversed bandage applied from the toes to the groin, the splint being then applied to the anterior surface of the limb, and fastened to it by means of a second bandage; the limb is then suspended from a frame, fixed over the bed, by a cord attached to the splint. (See Fig. 3.)

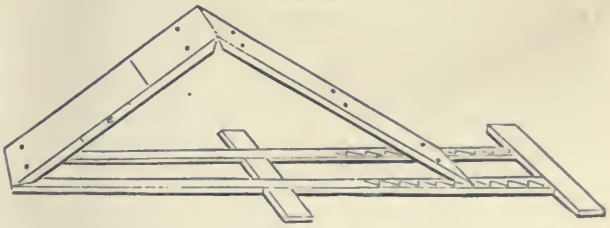
FIG. 3.



In some cases, Prof. Agnew uses the double-inclined plane (see Fig. 4) in the treatment of this fracture. The limb is placed upon the inclined plane, which has been previously well padded; extension is made by broad strips of adhesive plaster fastened to the sides of the thigh and secured by a few circular straps; the extending strips reach from a point just short of the seat of fracture to the knee, and terminate in a stirrup as in the ordinary extension apparatus; a cord is attached to this stirrup, which runs over an elevated pulley, and to this cord the weight is attached. Lateral support is given by short sand-bags placed against the thigh, or by bran-bags held in position by the sides of the inclined plane, on which the thigh rests. These may be hinged like the sides of the ordinary fracture-box.

The treatment of fractures of the femur in children presents some variety of dressing, depending upon the age of the patient. At the Children's Hospital, these fractures in very young children are treated as follows: The limb is extended, and the

FIG. 4.



fragments adjusted as well as possible; a bandage is then applied from the toes to the groin, a piece of binder's-board, long enough to extend from the foot to the brim of the pelvis, and wide enough to encircle the limb and part of the pelvis, is moistened in warm water, padded and moulded to the limb, and held in position by a bandage. This splint, when it becomes dry, holds the parts firmly in position, and permits of the child being lifted to take the breast if necessary.

In older children, the ordinary extension apparatus is applied, and lateral support is given by splints and bran-bags, or by sand-bags, the extending-weight, of course, being proportionally less than that required in the treatment of fractures in adults. In some other hos-

pitals, a flannel bandage is applied to the limb, and a plaster-of-Paris bandage carried up the limb from the toes to the groin, and finished with some turns about the pelvis, so as to fix the hip-joint.

Prof. Agnew, in treating these fractures in children, first etherizes the patient, and extends the limb, then applies a flannel bandage from the toes to the groin, and finishes it with some turns about the pelvis; a long wooden splint, extending from the axilla to the foot, is well padded and applied to the outer side of the limb, and secured to it by a plaster-of-Paris bandage, which is applied from the foot to the groin, and finished with some turns about the pelvis; the upper portion of the splint is fastened to the body by a few turns of a muslin bandage.

Fractures of the condyles of the femur are by most Philadelphia surgeons treated by extension and lateral support by means of sand-bags, the fragment or fragments being fixed by adhesive straps or compresses; or they are treated by placing the limb in a long fracture-box, extending from the foot to the upper part of the thigh, a soft pillow being first placed in the box, and after the limb is laid on this, the sides of the box being brought up and fastened by several strips of bandage, while the fragments are fixed by adhesive straps or compresses.

The application of the plaster-of-Paris bandage as a primary dressing, in the treatment of fractures of the femur in adults, has met with but little favor in the hospitals of Philadelphia.

MEDICAL PROGRESS.

TREATMENT OF SMALL-POX BY SALICYLATE OF SODA.—In the *Bulletin Générale de Thérapeutique* for Nov. 30, 1881, M. DUJARDIN-BEAUMETZ reports three cases of variola in which he obtained the most satisfactory results with the external application of salicylate of soda. In one case of severe confluent small-pox, accompanied by delirium, an ointment of cold-cream, one hundred parts to four parts of salicylate, was rubbed over the parts of the face and body where the eruption was severest; in addition to the ointment, a powder of one hundred parts of talc to six parts of salicylate of soda was dusted over the affected parts. The next day it was found that there was no increase in the size of the pustules, in some suppuration was prevented, and there was not the slightest odor developed. The data are as yet insufficient for any conclusion to be drawn as to the value of this remedy in variola, but its apparent success in the cases reported, particularly its power of destroying the repulsive odor accompanying severe cases, and its harmlessness, should lead others to repeat Dr. Dujardin-Beaumetz's experiments.

FORCED FEEDING IN PHTHISIS.—Dr. DUJARDIN-BEAUMETZ in the *Bulletin Générale de Thérapeutique* for November 15, 1881, calls attention to the method of forced feeding practised by Dr. Debove. The patients are fed through a stomach-tube, large quantities of milk, raw meat, fresh eggs, and cod-liver oil, twice a day. Sometimes the stomach is prepared by a preliminary washing, in cases treated at San Antoine by Dr. Dujardin, where symptoms of gastric catarrh are pronounced. Dr. Debove does not practise this washing, but introduces the aliment without any preparation. Dr. Dujardin-Beaumetz's mixture consists of 150 grammes (about 5 ounces) of raw meat, 4 eggs, 1 litre (somewhat more than 2 pints of milk), and he sometimes adds a little salt, cod-liver oil or peptones, the last two when there is no diarrhœa, and when diarrhœa is present he adds subnitrate of bismuth. It is very remarkable that patients fed in this way are very rarely made sick by the presence of so much material, and, as a rule, digest it with facility. If the stomach has been irritable before, and food has been rejected in the paroxysms of coughing, this no longer occurs, and the nutrition greatly improves. The general condition is also ameliorated. The pulse becomes firmer and less frequent, the cough lessens and the sweats cease. Thus far no change in the pulmonary lesions has taken place, but if such a decided improvement in the nutritive energies persists, the local morbid process, we think, cannot fail to grow better.

This method of treatment is equally applicable to tubercular lesions of the larynx or fauces where deglutition is painful or impossible.

INJECTIONS OF ERGOTINE BEFORE PERFORMING IREDECTOMY.—Dr. CH. ABADIE recommends the injection of ergotine before performing the operation of iredectomy or sclerotomy. He believes that by this means the danger of intra-ocular hæmorrhage is avoided.—*Bull. Gén. de Thérapeutique*, Nov. 15, 1881.

SIMPLE METHOD FOR THE CURE OF OZÆNA.—Dr. GOTTESTEIN (*Gazz. Med. di Roma*) considers ozæna as a constant symptom of chronic coryza. There is no doubt that, after the interference with the function of the glands, there is a diminution and alteration of the nasal secretion. Part of it, drying rapidly, adheres to the mucous membrane, on which it forms crusts, and it is the decomposition of these which is the cause of the odor. It is, therefore, only necessary that a limited portion of the mucous membrane should undergo atrophy to give origin to an ozæna. In adopting this theory of ozæna, it is evident that there can be no question of radical cure, since it cannot be hoped that the secretion of an atrophied mucous membrane can ever become normally re-established. We must therefore be satisfied with the treatment of symptoms which is the most simple and convenient for the patient.

The author was led by chance to employ the following method, from which he has already, in fifteen cases of ozæna, seen the best results in less than three months.

Dr. Gottestein commences the treatment with a nasal douche, which, by freeing the cavity from its secretions, permits the recognition of the character of the mucous membrane and the extent of the lesion. This is followed by the introduction of a tampon of cotton, 3–5 centimeters long, which should remain in position for twenty-four hours.

About an hour and a half after the introduction of the cotton, there is a little secretion from the nose. When the tampon is withdrawn, the secretion is found to be fluid and without crust or odor. Twenty-four hours can be allowed to elapse between two applications of the tampon. When both sides of the nose are affected, the nose can be tamponed every twenty-four hours on the alternate sides. The tampons cause an artificial contraction of the cavities, and so increase the action of the column of air and facilitate the expulsion of the secretions, which are absorbed as rapidly as they are formed, and their desiccation is thereby prevented.—*L'Union Méd.*, Nov. 27, 1881.

THE VAGUS AND THE EAR.—In a series of experiments as yet unpublished, which have been made by M. WIETT on the effects of stretching the pneumogastric nerve in rabbits, the effects on the ear were studied by M. Gellé. He found lesions in all respects similar to those which are produced by laceration of the medulla or irritation of the fifth nerve, hæmorrhages and

suppuration, with destruction or ulceration of the tissues. In one case the mischief was limited to the external auditory meatus, and consisted in a hæmorrhage into the lining membrane and periosteum of the lower wall. In another the meatus contained a still larger clot, and in the middle ear was a quantity of semi-solid creamy pus, which filled the chamber and had escaped into the external auditory meatus through the membrana tympani, which was softened and perforated. The ossicula were displaced with the exception of the stapes. The liquid of the internal ear was bright red in color.—*Lancet*, Nov. 19, 1881.

OPERATIVE ASSISTANCE IN INFANTILE PARALYSIS.—Some cases recently operated on by Prof. ALBERT have excited a good deal of interest. Struck by the fact that many subjects of infantile paralysis are condemned to the life-long use of more or less complicated apparatus to compensate for the loss of rigidity in the lower limbs, and that the poor cannot get such instruments, he has attempted to increase the use of the legs by operation. He excises the knee- and ankle-joints, and thus obtains bony anchylosis between the femur and tibia, and tibia, fibula, and astragalus. The rigid lower limbs in walking are swung forward by the adductor and great flexor muscles of the hip-joint, which generally retain or recover their power. This treatment has already been carried out in four cases, and a fifth is now preparing for operation.—*Lancet*, Nov. 19, 1881.

NERVE STRETCHING IN ARTIFICIAL CEREBRAL PARALYSIS AND CONTRACTURE.—At the meeting of the Société de Biologie, on November 19, M. BROWN-SEQUARD presented a monkey in whom he had four months before extirpated the motor centre of the left leg, which was followed by paralysis of the left leg, then atrophy and contracture in flexion; the limb also became 3 centimetres shorter. Twenty days before the report was made, M. Brown-Sequard stretched, with a two-pound weight, the left sciatic for five minutes; immediately afterwards the paralysis was increased, but the contracture diminished, and an hour after the experiment the limb had gained a centimetre in length, the next day one-half centimetre, and five days later both limbs were of the same length; the paralysis was also much improved after four or five days. There was then a partial return of the contracture, and the author proposed to again stretch the left sciatic, and report on the result.—*Le Progrès Médicale*, Nov. 26, 1881.

TRANSFORMATION OF ALCOHOL IN THE SYSTEM.—M. JAILLET submitted to the Société d'Émulation, the results of some recent observations on this subject. He affirms that the blood mixed with a certain quantity of alcohol in presence of oxygen, transforms alcohol into acetic ether, and that the blood globules, as has been stated by Pasteur, is a ferment cell which carries on in an alkaline solution the same process as the yeast of beer. Oxygen absorbed by the hæmoglobulin passes to the state of nascent or active oxygen, which is able to oxidise promptly and totally all the alcohol which enters the blood current. His conclusions are:

1. Alcohol ingested by the stomach is in part decomposed by the natural ferments with which it immediately comes in contact (the gastric juice, saliva, pancreatic juice, etc.), aided by the mysterious and destructive action of the liver. From this organ the alcohol passes in venous blood to the lungs, where it is widely diffused, a small quantity eliminated in the natural state, but the principal part is transformed into acetic ether. Finally the oxidation of the alcohol is accomplished in the systemic circulation where the acetates formed are totally burned.

2. When alcohol is absorbed after subcutaneous administration, the conditions are changed. The alcohol immediately enters the systemic circulation, arrives at the heart, then the lungs, and as it reaches these organs quickly and in large quantity, it is freely eliminated, as shown by MM. Perrin, Duroy, and Lallemand. Administered subcutaneously, there can be no action of the ferments of the organism; the liver does not affect its disintegration, for the alcohol has meanwhile been imbibed by all the tissues, and is diffused generally, without having been subjected to any modifying influences.

3. Alcohol is a substance which arrests respiration by preventing hæmatosis; in a word, alcohol asphyxiates without being in itself a poison. In the process of its transformation into acetic acid alcohol utilizes the oxygen being conveyed to the tissues by the blood globules, and it thus diminishes combustion in the body. This fact explains its antipyretic action. Death by alcohol is an asphyxia by carbonic acid, and we have found in animals and in man all the symptoms and the anatomical conditions of this asphyxia. It can thus be readily comprehended why alcohol, in the form of vapor, is so much more dangerous than alcoholic drinks, and produces so much more rapidly serious symptoms of poisoning.—*Journal de Thérapeutique*, Oct. 10, 1881.

PHENOMENAL TEMPERATURES.—Dr. Mahomed narrated to the Clinical Society of London (*Lancet*, November 5, 1881) the case of a hysterical female who was able to develop, or, at least, register on the thermometer, any temperature desired, 128° F. being recorded in one instance. Indeed, she appears generally to have been limited merely by the length of the scale of the thermometer, the index being usually lodged in the expansion at the top. She was only able to develop these temperatures with registering thermometers in the mouth and axilla, and then only when motion of the arms was not prevented, while surface thermometers gave a normal temperature. Dr. Mahomed remarked that it was easy to send the index of an ordinary clinical thermometer up to the top, in from ten to fifteen seconds, by rubbing it between the slightly moistened finger and thumb, exerting at the same time considerable pressure on the bulb. The same result can be obtained by enveloping the bulb of the thermometer in several folds of silk and placing it in the mouth, and then inspiring by the nose and expiring by the mouth; the result, no doubt, is produced by the evolution of the latent heat of the watery vapor of the breath as it becomes condensed upon the silk. The method used by the above case was not discovered.

In the same journal, Dr. Stephen Mackenzie reports a case of excessively high temperature in a woman who, after puzzling her physicians for some time, confessed that she produced the high temperature by poultices, hot bottles, etc.

TREATMENT OF HYDROCELE.—Dr. T. L. OGIER, of Charleston, S. C., advises the injection of about thirty drops of the undiluted compound tincture of iodine directly into the sac of the *tunica vaginalis testes*, without drawing off the effusion, in cases where a radical cure is desired, and where confinement must be avoided. He repeats the injection on alternate days, and states that in sixteen cases this treatment has been followed by the complete and permanent absorption of the fluid without any pain or inconvenience to the patients, and without confining them to the house. During the treatment, Dr. Ogier recommends the use of a suspensory bag, which is to be gradually tightened as the swelling subsides.—*Gaillard's Med. Journ.*, Sept., 1881.

PROLONGED DILATATION OF THE ŒSOPHAGUS.—Dr. M. KRISHABER gives the following conclusions in a recent paper on this subject:

1. The œsophagus will tolerate a bougie for an indefinite period. (He reports cases in which the sound was retained for 305, 46, 165, and 251 days.)

2. The sound should be introduced through one of the nostrils, and not by the mouth.

3. The permanent presence of the sound permits the dilatation of the stricture to a sufficient degree to render the introducing of gradually increasing sizes possible, exactly as is practised in cases of urethral stricture.

4. A gum œsopageal sound should be introduced in the first instance, and, after remaining in place for a few days, should be replaced by a softer and more easily tolerated rubber sound.

5. Feeding is absolutely assured by this method, and false passages, as are apt to be made in intermittent catheterization, are avoided.

6. In cases where the stricture necessitates œsophagotomy, the sound should be placed in position as soon as the incision is made, and allowed to remain, so that cicatrization will occur around it, and obliteration of the œsophagus be prevented.

7. Besides the above-mentioned uses of the sound, it may be left in position for conducting the nourishment of phthisical patients, paralytics, etc.

8. It is also of great use in operations on the face, mouth, and naso-pharynx.

9. In these latter cases, the sound should be placed in position several days before the operation, and allowed to remain until the cure is complete.—*Ann. des Maladies de l' Oreille, et du Larynx*, Nov., 1881.

THE PARTICIPATION OF THE LIVER IN THE PRODUCTION OF UREA.—In order to obtain an exact appreciation of the share attributable to the liver in the production of urea, SOLHIKOFF (*Petersburger Medical Wochenschrift*, No. 51, 1880,) conceived the idea of connecting, in large dogs, the vena porta directly with the external jugular by means of a rubber tube, an operation which, when accomplished with due precautions, is relatively well borne. When the communication is established between the venous trunks, the blood-pressure is at first depressed, but soon regains its normal height; but the urinary secretion ceases completely, and does not become re-established until urea is injected into the blood of the animal. The injections of urea cause no elevation of blood-pressure, but may sometimes even produce a depression. Previous section of the splanchnic nerves does not modify these results.

As control experiments, the author connected the crural vein with the jugular, and found that the urinary secretion was not modified. He concludes, therefore, that it is the blood coming from the liver which throws into the circulation the urea which is to be removed by the kidneys.—*Gazette Médical de Paris*, Nov. 12, 1881.

COMMUNICATION OF SYPHILIS BY SKIN-GRAFTING.—Dr. DEUBEL communicated the following case to the Société Médical des Hopitaux: A man, aged forty-nine, who had never contracted venereal disease, became, in January, 1881, the subject of gangrenous erysipelas of the thigh, which was attended with a large ulceration, having its starting point in the superficial ulceration of some hæmorrhoids, that, except at some isolated points, refused to cicatrize. On March 7, forty-five dermo-epidermic grafts, furnished by five persons, were inserted, and thirty-three of these contracted adhesions; and twenty other grafts taken from seven persons, aged from twenty to forty years, were placed on another part of the wound on the 23d, thirty of the number retaining their vitality. Grafts from the mucous membrane of the mouth of a rabbit were also employed, and on the 23d of March forty new grafts, taken from persons aged from twelve to fifty-four years, were applied. Cicatrization went on satisfactorily until April 5, when ulceration commenced in the now almost cicatrized wound where the first grafts had been planted, and soon destroyed the cicatrization. The grafts applied on the second occasion did not ulcerate, but became pale and fell off. The new ulceration had a syphilitic aspect; but the man's wife, who had nursed him, having also been seized with erysipelas which proved fatal, and a lodger suffering from lymphangitis, it was concluded that the whole had arisen from infectious causes due to the very unsanitary condition of the abode in which they all resided. The ulcerations improved on being touched with nitrate of silver, but new ones kept appearing during the next three months, and ten weeks after the first application of the grafts the skin and scalp became the seat of syphilitic eruption, and some weeks later the mucous membrane of the mouth was affected. A mercurial and iodide treatment was put into force, and eight months after the first appearance of the erysipelas the breach of surface became entirely cicatrized. It turned out that a son, who had furnished some of the grafts, was the subject of syphilis.—*Gaz. Méd. de Paris*, Nov. 5, 1881.

BELL'S INDUCTION BALANCE.—At a recent meeting of the Académie des Sciences (*L' Union Médical*, Nov. 12, 1881), M. ANTOINE BREGUET read a note from Mr. A. Graham Bell, on an apparatus which may be considered as a modification of the well-known induction balance of Hughes, and which permits of the localization—without pain to the patient, as no sounds are used—of any metallic substance in the body.

The instrument is composed essentially of a system of two flat bobbins, parallel, and so placed one above the other that the border of each lies near the axis of the other. One of these bobbins, wound with coarse wire, is the primary circuit; the other, wrapped with fine wire, is the secondary circuit. The two bobbins are together immersed in a mass of paraffine, and placed in the interior of a plate of wood furnished with a handle. A vibratory current, coming from a battery, traverses the primary circuit, while an ordinary telephone is included in the secondary circuit.

Under these conditions, no sound can be detected in the telephone; but if one brings any metallic substance whatever near the junction of the two bobbins, the silence will be broken by a sound which will depend in intensity on the nature, form, and distance of the metallic body. It may be remarked in this connection, that the most favorable shape of the projectile is that of a flat disk, parallel to the surface of the skin, and the most unfavorable is when the axis of the disk is parallel to the surface.

It is difficult, in practice, to secure the exact adjustment of the relation in position of the two bobbins: it is, therefore, convenient to introduce into the primary and secondary circuit two other bobbins, analogous to the first but much smaller, whose surface of contact can be increased or diminished by a micrometer screw, and the telephone reduced to complete silence. If it is wished to determine the depth at which the metallic body lies, its form, mode of presentation, and substance must first be known. These being known, it is only necessary to throw the bobbins sufficiently out of contact, while applied to the skin, to cause the telephone again to show silence. After that, withdrawing the apparatus, a body similar to the one explored is approached until the silence is again reproduced. The distance at which this occurs in the second instance is the measure for the distance to be determined.

Prof. Bell's note, illustrated with wood-cuts, has also appeared in English in the *American Journal of Science* for Jan., 1882.

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LESSONS OF THE GUITEAU TRIAL.

WITH Guiteau and his trial our readers, probably, have had something of a surfeit, but as journalists it is our duty to utilize any aspect of the case which may be of interest. The assassin is a phenomenon —an object of interest alike to the sociologist and to the psychologist. Inheriting with his French name some distinctively French characteristics, and influenced in his moral and mental development by the forces of the social life about him, his present state is a logical outcome, and he is a not inconsistent product of some elements in our American civilization. Vain, egotistical, and ignorant, he received sufficient education to give still more obliquity to his ill-balanced faculties. Bent on making a noise in the world, he tries, in turn, theology, law, politics, lecturing—anything by which he may achieve notoriety and be spoken of by the newspapers. These failing, what expedient more natural than some desperate deed, which will surely cause all eyes to turn on him. He is a type of a class becoming, unhappily, too common. A wild passion for notoriety, the outgrowth of a faulty training, half-education, and a literature composed of newspapers and dime novels, are developing a class of Guiteaus which seems likely to become too numerous in this country.

The Guiteau trial has awakened renewed interest in the question of the proper methods of utilizing expert testimony. As is usual, we have had exhibited the unseemly spectacle of experts arrayed on the two sides like so many paid advocates. The public, the lawyers, and even the wretched assassin, must be excused if they see in this only a willingness on the part of experts to give testimony on any side to which their interests may incline them. Need we be surprised that counsel take every opportunity to belittle their attainments and impugn their honesty? This state of feeling was shown in the contest between the attorneys for the prosecution and Dr. Spitzka. Because the latter is a professor in a veterinary college, he was contemptuously styled "a horse-doctor." The sympathy which the medical profession would have for Dr. Spitzka, as an expert of high attainments who had suffered most outrageous indignity from counsel whilst before the court in his proper character, is, unfortunately, destroyed by his treatment of his fellow-experts. To characterize those who differ from him as fools or knaves, is an unwarrantable abuse of his position, and an act of professional discourtesy for which he ought to be disciplined. There is much in the conduct of many of the experts to admire. Some of them came to Washington to testify their belief in the insanity of Guiteau, but on a careful study of the criminal himself, they were constrained to form a different opinion, in which all intelligent persons competent to form a judgment will probably concur. It is much to their credit that they were not afraid to change their opinions. Far different was the conduct of Dr. Spitzka. Making up his opinion in advance from insufficient data, he adhered to it with unreasoning obstinacy, and illustrated the nature of his mental processes by assuming his own infallibility, and condemning those as fools who ventured to express opposite opinions.

CRANIOLOGICAL CHARACTERISTICS OF ASSASSINS.

AN expert for the defence in the Guiteau trial has enlarged on the importance of certain craniological peculiarities of the assassin's head. The technical terms in which Dr. Spitzka defined and classified the malformation astonished the reporters. Our lay contemporaries, on a sudden, have taken to the discussion of cranial topography, but the most important contributions are made by the hatters, who, producing their charts, have disclosed to us how many of our reputable citizens should, if their cranial conformation is to decide, be assigned to the gallows or to a mad-house. The hatters say that symmetry of the head is rather exceptional and abnormal, and that even considerable deformity is not incompatible with the possession of superior powers of mind.

It is very satisfactory, at this juncture, to be able to call in for examination some independent and unbiassed testimony. Whilst discussion is going on over the head of the wretch Guiteau, a valuable contribution to the cranial characteristics of assassins has appeared in the *Revue Internationale des Sciences Biologiques*, No. 11, by MM. Heger and Dallemagne. Their study is based on a series of assassins executed in Belgium, who do not constitute a species

apart from the type to which they belong, say these authors. The lack of resemblance in the crania of the different series of assassins conducts them to the conclusion that it is impossible to formulate a theory of the craniological characteristics which will include them. On the other hand, the study of these characteristics has demonstrated that amongst assassins there are many whose cranial conformation reveals mental inferiority.

Thus it appears that, in the present state of knowledge of the subject, it is hazardous to draw conclusions from the cranial conformation. Although general conclusions may be drawn from the shape of the head in regard to the mental power of individuals, the facts do not warrant the attempt to define the characteristics belonging to assassins. The subject of cerebral localization is not in a sufficiently advanced state to permit even an approximative representation of the parts of the brain purely intellectual in function, and of those devoted to the moral or affective faculties. How much more obscure the subject, when the surface topography of the cranium enters into consideration! It is, of course, perfectly well known that the protuberances and depressions of the exterior are imperfectly, or not at all, represented within—a fact which constitutes an insuperable objection to the doctrines and the localizations of function put forth by the phrenologists.

ARE THERE STRICTURES OF LARGE CALIBRE?

A RECENT writer, entitled to speak with authority, asserts that gonorrhœa, by reason of its great prevalence and of its remote effects, is the most prejudicial to the public health of all the venereal diseases, not excluding syphilis. This is contrary to the commonly received view, and may be rather too broad a statement; but, unquestionably, of late years the disease has assumed an increasing importance, as the constant pathological results of continued irritation of mucous passages, the reflex symptoms and ailments produced by interference with the genito-urinary tract, and the changes undergone by the bladder when its long accustomed work is notably increased, have been more fully and thoroughly recognized.

Accurate statistics on such subjects are necessarily unobtainable, but the course of reasoning which results in the conclusion above stated may be outlined as follows:

A very large percentage of adult males have been at some time the subjects of acute urethritis; in two-thirds of these the disease has been several times contracted, or has on at least one occasion run a protracted course; persistent irritation at any given point in the body results in an increase of the fibrous tissue in that region, associated with a deposit or development of new tissue of a similar character; this is especially true of mucous and submucous surfaces. Such a deposit occurring beneath the mucous membrane lining the urethra, interferes to a greater or less extent with the lumen of the canal, and thereby constitutes a stricture.

If a current of liquid be passed along a tube, a certain degree of friction proportionate to the amount and velocity of the current and the size of the tube takes place between the walls of the latter and the liquid; if the tube be narrowed at any one place, the friction is increased at that point, and, to avoid a notable diminution in velocity, the propulsive force behind the liquid must also be correspondingly increased.

Habit is a powerful agent in facilitating and governing the functions of animal life; in the case of a young adult, the bladder has, during twenty-one years, gradually accommodated its efforts and its powers to overcome a certain average amount of resistance. This equilibrium or balance between its expulsive force and its work, the result of thirty thousand distinct acts of micturition, taking an average of four daily, cannot with impunity be disturbed. The very moderate amount of prostatic enlargement which often suffices to bring on vesical troubles is an illustration of this fact.

The increased friction and resistance resulting from even a slight fibrous peri-urethral deposit disturb the normal relations of the bladder, and, by rendering it irritable, bring on one of the common symptoms of stricture—frequent micturition. The imperfect closure of the tube, the muscular action of which, at the point of deposit, is materially interfered with, causes the equally imperfect expulsion of the last drops of urine, and produces another characteristic symptom—dribbling at the end of micturition. The retention and decomposition of these last drops, together with the abnormal friction between the stream of urine and the urethral walls, give rise to a sub-acute inflammation of the mucous membrane, accompanied with a catarrhal or muco-purulent discharge, constituting the well-known condition of gleet; by reflex irritation transmitted from the area of inflammation, pains are developed in remote situations, notably in the lumbar and hypogastric regions.

We have, then, a group of symptoms apparently resulting from a sub-mucous urethral deposit and sufficiently characteristic, to wit: frequent urination, dribbling at the end of the act, gleety discharge, and certain aches or dull pains in the small of the back or over the pubes.

The relation between these symptoms and the general physical and physiological laws which have been alluded to, however crude it may appear as here briefly sketched, has been in the main accepted

as correct by the profession for many years. Probably no one would deny that in certain strictures in which the urethral calibre is markedly diminished the connection between the pathological changes and the observed indications is about as has been stated. The differences of opinion which now exist are chiefly as to the *amount* of urethral contraction which is sufficient to produce noticeable results, and here the argument must rest upon clinical observation supported by the results of autopsies. That every urethral coarctation must at some time have been a "stricture of large calibre," is a self-evident fact; and that the tendency of all such strictures is to gradually diminish the size of the urethra, and to interfere with its dilatability, is equally clear from the well-known proclivity of cicatricial tissue, wherever found, continuously and steadily to contract. This is no more and no less noticeable when that tissue is situated around the urethra than when it occupies the intertubular spaces in interstitial nephritis, strangulates and destroys the parenchyma of the liver in cirrhosis, produces induration and bronchiectasis in chronic pneumonia, or in any of the many possible directions exerts its power in the production of disease. Although, as has been said, the exact degree of contraction which renders it an active pathological factor in urethral cases is undetermined, it may yet be safely asserted that there are few surgeons at the present day who would agree with Sir Henry Thompson in the belief that the easy introduction into the bladder of a sound eighteen or nineteen millimetres in circumference is sufficient to demonstrate the non-existence of organic stricture. Indeed, the observed variations of the normal urethra are such that no special dimensions can be assigned to it as representing the precise dividing line between health and disease; the old method of regarding the size of the meatus as an indication of the normal calibre of the canal behind it being unquestionably fallacious, it having been conclusively shown that no definite relation exists between them. On the other hand, it has also been shown that there are usually certain normal variations in the calibre of the urethra, even in the spongy portion, which is now claimed with much show of truth as the most frequent seat of pathological contractions, and that it is impossible, with any of the means at our command, to distinguish between these natural irregularities and coarctations of equal calibre due to incipient strictures. The great importance of bulbous bougies in detecting, measuring, and locating stricture has, however, been more fully recognized than ever before, and coincidently the unfitness of the ordinary steel sounds for the same purpose, by reason of their weight and their conical shape.

In conclusion, it may be said that, although our knowledge is insufficient to determine in every case the exact nature or pathogenetic value of any given slight diminution in urethral calibre unattended with symptoms, we have yet abundant evidence, clinical and post-mortem, to enable us to advance, with little risk of contradiction, the following propositions, applicable to the vast majority of cases:

A patient who, after an attack of gonorrhœa, develops any or all of the above-mentioned symptoms, has in all probability a commencing stricture.

If a careful examination with a bulbous bougie reveal any constriction other than the one at the triangular ligament, which is known to be normal, it may with confidence be considered as due to a fibrous deposit in the sub-mucous tissue, and the symptoms may be referred to it.

This condition, though yielding readily to proper treatment, is, if neglected, productive of serious consequences, which, in exceptional instances, may even imperil life, through continuous irritation of that portion of the genito-urinary tract posterior to the contraction.

Such sequelæ are to be expected in a large proportion of cases of long-continued or oft-repeated gonorrhœa, are possibly even numerous enough to justify the assertion quoted at the head of this article, and, at any rate, in view of their extreme frequency, demand the thoughtful consideration of the profession.

COMPULSORY VACCINATION.

THE very general prevalence of small-pox throughout the country is naturally directing attention to the means of its prevention. No one at the present day can plead ignorance of the protective power of vaccination when properly performed; and it is therefore surprising that, in the very face of danger, the proportion of the inhabitants of every community who have not availed themselves of this proved means of safety remains a very considerable one. How to secure universal vaccination, or, in other words, how to prevent the repeated incursions of epidemic small-pox, is a problem which at this time deserves most serious consideration. Its solution would seem to lie in a successful effort to make vaccination compulsory either by fine or by imposing disabilities for its non-performance. This latter plan has already been adopted to a considerable extent, but its availability must necessarily be limited; and it would therefore appear that nothing short of direct compulsion by law will secure the desired result. Compulsory vaccination has never been adopted in this country to any great extent, but there can be no valid reason why the American people should hesitate to sanction a measure which, if wisely enacted, would redound to the benefit of the whole country. The idea of its conflicting with

the right of unmolested enjoyment of personal liberty, is pure sentimentalism. The liberty to spread disease by neglecting or refusing to observe the means of prevention known to be safe and efficient, and which is within the reach of every one, is a liberty which should be abridged by the enforcement of wise laws.

Already there can be discerned, in recent legislation on the subject of vaccination, the evidences of a better appreciation of the importance of this question. The National Board of Health have adopted the following rules, in conformity with the provisions of the act of June 2, 1879, to prevent the introduction of contagious and infectious diseases into the United States from foreign countries, and from one State to another, which rules were approved by the President, November 11, 1881, and are now in operation, to wit:

1. That all persons coming from or through any foreign port or place in which small-pox exists, who, after the 14th day of November, 1881, shall arrive at any port of entry within the United States, shall be subjected to examination as regards their protection from that disease by the proper health authorities of the State within which such port lies, or in case such authorities shall fail or refuse to enforce this rule, then by some officer or other proper person, to be designated by the President of the United States.

2. That in case any person so arriving shall refuse to submit to such examination, or upon undergoing the same shall be found not sufficiently protected from small-pox, such person, and in case he or she be not *sui juris*, then also the person having him or her under charge, shall be detained in quarantine until he or she shall have been properly vaccinated, or shall have passed the period of incubation from date of last exposure.

Still more recently, the City Councils of Richmond, Va., have passed an ordinance requiring the immediate vaccination of all residents who have not been vaccinated within the past twelve months, "except in such cases as any regularly licensed physician shall declare it to be injurious or unnecessary." Its violation is made punishable by fine. The ordinance is not so complete as it might be, and bears evidence of hasty preparation, but the effect of its passage cannot be otherwise than beneficial. If a like energetic and radical crusade against small-pox were undertaken throughout the country, this disease would soon cease to commit the ravages which are now, unfortunately, of very common occurrence.

THE PROSECUTION OF DR. FERRIER BY THE ANTI-VIVISECTION SOCIETY.

THE Secretary of the Antivivisection Society in England, Miss Frances Power Cobbe, has been very active in denouncing the vivisectionists since the failure to convict Dr. Ferrier. She is not sparing in her abuse of the medical profession, also. As is not unusual, the zeal of these pretended humanitarians quite outruns their discretion. Dr. Ferrier was dragged before the police court for a violation of the vivisection act, as will be seen in our London news, when the supposed offence was committed by Dr. Yeo, who had a license in proper form. The expense and trouble suffered by Dr. Ferrier on account of the misdirected zeal of the Society, for which they offered no excuse or apology, has had the effect of increasing the dissatisfaction felt in the operations of the vivisection act. In an interesting letter to the New York *Tribune* from its London correspondent, we find a calm and judicial statement of the vivisection question, and an account of the injury done to scientific work—at least on the physiological side—which has been for the most part suspended. The correspondent shows that the abusive communications printed by Miss Cobbe, and the bad effect of the vivisection law in stopping original researches in England, are stirring up an opposition to this intemperate law, which will probably result in its modification. It is a hopeful indication when such an intelligent and appreciative discussion of the subject appears in a daily paper from its London correspondent.

THE VIVISECTION LAW AND THE CHINESE OPIUM TRAFFIC.

IT is not possible to reconcile the humanitarian sentiment of the English which has suppressed vivisection as a means of scientific research and that aggressive self-interest which has forced the opium traffic on China. The members of Parliament who enact laws against experimentation on animals for a scientific purpose, will shoot pigeons in hundreds on a wager, and pursue birds and beasts to death for mere sport. They, further, protect animals for their own sports by stringent game laws, and force opium on the poor Chinese to keep up the revenues of India. In the issue of the *Medical Times and Gazette* for December 10, 1881, we find an article on the opium traffic, in which a defence of the British policy is implied in the arguments for the use of this drug.

It appears there are 2,000,000 of Chinese who expend a daily average of 5*d.* to 11*d.* (10 to 22 cents) per person for smoking opium. The annual expenditure of China for opium is £25,000,000 (nearly $125,000,000), one-half of which is obtained from India. The traffic is justified on the following grounds (having been forced on China by the bayonet):

"Opium has a dietetic as well as a medicinal value. It is customary for the reformers of society, with reference to this drug and alcohol, to bracket them together in one sweeping condemnation; but,

while the latter is simply a temporary stimulant, for which there are substitutes equally powerful, though not so pleasant to swallow, the former tranquillizes, arrests waste of tissue—being in this respect to the poor Chinamen what tea is to the same class in the United Kingdom—and in time of famine takes the place even of food; to say nothing of its incommutable value as a medicine. Its reception into the heart of society is too universal and deep for Acts of Parliament or imperial decrees to be efficacious in preventing its consumption." And yet we are told in another part of the same article, "it seems at first sight somewhat remarkable that, because two-thirds of one per cent. of the 300,000,000 of the people of China choose to consume opium—some only of these to an immoderate extent—the well-wishers of the country should so earnestly desire to do away with the consumption of the drug altogether."

FIRE-ESCAPES FOR HOSPITALS.

THE recent fire in a Philadelphia mill, which caused so fearful a loss of life, from want of any fire-escapes, should call the attention of all our hospital authorities to the need for fire-escapes. If they be necessary in mills, hotels, and other buildings in which the active and the well are employed, the need is far more pressing for numerous escapes in buildings in which many if not most of the inmates are to a certain extent disabled. The absolutely helpless could scarcely escape even with assistance, but we should beware of penning up patients who are not bed-ridden, without sufficient means of escape, in third and fourth stories, all ready for a horrible holocaust. We are glad that in Philadelphia the Mayor and the City Councils are moving in the matter, and we trust that our hospitals, not only here but everywhere, will act cordially, quickly, and efficiently.

If our City Fire Departments had suitable mattresses to carry quickly to fires, or stout sheets, as it seems were used in Vienna in the fire at the Ring Theatre, either of which would break the fall for those who must jump, they would often have a valuable means of saving life.

SIR JAMES PAGET, BART.

SIR JAMES PAGET'S many friends and admirers on this side of the Atlantic, will learn with regret that at the end of November he was confined to his bed by an attack of pneumonia, similar to other seizures previously experienced by him since he suffered from blood-poisoning. We are happy to be able to state that at the latest accounts he was decidedly better and had gone to the south of France to recuperate his health.

REVIEWS.

MR. SPENCER WELLS'S NOTEBOOK FOR CASES OF OVARIAN AND OTHER ABDOMINAL TUMORS. *Sixth Edition.* London: J. & A. Churchhill, 1881.

To surgeons who practice ovariotomy and abdominal surgery Mr. Wells's notebook is of great service. He who follows it cannot avoid making, what is absolutely essential in cases of abdominal growths, a careful examination, and careful examinations lead to correct diagnoses. The plan of the notebook is such as will obtain, under proper headings, a complete history of each case, with record of diagnosis, prognosis, treatment, medical or surgical, and results of treatment.

One or two points, in the examination of the pelvis, are worthy of special note. First, that in cases of probable pregnancy the sound should not be used to ascertain the length of the uterine cavity, and, second, examination of the uterus by the rectum affords much more information than is commonly supposed. This method of examination should always be employed in conjunction with those which it may be deemed safe to make.

In this edition, the sixth, the author adds a note as to the antiseptic precautions he has employed in his later operations. In January, 1878, he began to employ the complete antiseptic system, and from that date to the issue of the edition, April, 1881, he performed 137 operations, with 13 deaths—a mortality of 9.4 per cent. He states, as his belief, that "this diminishing death-rate is mainly due to the additional antiseptic precautions." This conclusion will be accepted, it is believed without question, by surgeons in this country who have performed ovariotomy under the old and new methods.

ANTISEPTIC SURGERY. By Dr. JUST LUCAS-CHAMPIONNIÈRE. Translated from the second edition by FREDERIC HENRY GERRISH, M.D. 4to, pp. 239. Portland: Loring, Short & Harman, 1881.

The student who desires to learn the antiseptic theory, the preparation and application of the Listerian dressings, and the adaptation of the system to all sorts of operations and all regions of the body, will find in this book a satisfactory guide as far as the subject can be treated in so brief a space. That the author has the courage of his antiseptic convictions, is proved by the fact that, even in obstetric patients upon whom he has operated, he allows his class of students to make daily vaginal examinations, and his internes to dissect and make post-mortems *ad libitum*, provided they use antiseptic precautions. In spite of this, too, his mortality has been very low. As a commentary, not very flattering to the administration of French hospitals, on page 175 (the appropriate "running title" of which is "a plea for cleanliness") he states that "in Paris all the habits of the students are in need of reform. I do not blame them; it is physically impossible for them to be surgically neat in the hospital. . . . At present not only is nobody compelled to wash his hands, but it is almost impossible to do it in a hospital, so poor are the facilities."

Dr. Gerrish has translated the book admirably; in fact, it can scarcely be discovered that the book is a translation. But we are disposed to take exception to the use of so rare a word as "germ-bearing *epithem*" for "application" or "dressing," and still more to the imported phrase, especially affected by many of our German scholars, "to *make* an operation." Dr. Gerrish even goes farther, and speaks of "making sutures."

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 5, 1882.

FORDYCE BARKER, M.D., PRESIDENT, IN THE CHAIR.

The annual election resulted as follows: For Vice-President, H. T. Hanks, M.D.; for Trustee, C. Fayette Taylor, M.D.; for Member of Committee on Admissions, J. E. Janvrin, M.D.; for Member of Committee on Ethics, Chas. A. Leale, M.D.; for Member of Committee on Education, F. A. Burrall, M.D.; for Member of Committee on Library, J. C. Peters, M.D.; for Delegates to Medical Society State of New York, Drs. A. M. Jacobus, L. Elsberg, C. C. Lee, Everett Herrick, F. A. Birdsall.

The scientific paper of the evening was by SAMUEL SEXTON, M.D., and was entitled:

The Treatment of Diseases of the Middle Ear and Contiguous Parts by Milder Measures than those Commonly in Vogue.—The author avoided such details as were only of interest to otologists. The causes of suppurative diseases of the ear were arranged under three heads: first, nervous sympathy, as from dental or uterine irritation; second, extension of catarrhal inflammation from the naso-pharynx through the Eustachian tube to the ear; and third, mechanical or direct influences, as the entrance of water in bathing and the use of the nasal douche. More than one of these causes might be active at the same time. His experience had been, that among adults the graver cases occurred more frequently in males. Of such cases one-half were consecutive to acute attacks. Among children, it was his impression that the graver cases occurred more frequently in females. Many cases of acute aural catarrh ran a mild course. The secretions of the middle ear were slight in quantity, and could escape through the Eustachian tube, or where this was not possible an outlet was afforded by the rupturing of the drum-head, which healed up very rapidly under favorable circumstances. If such simple cases, however, were treated by violent measures, such as leeching, blistering, and untimely incision of any of the tissues about the ear, or by vigorous inflations of the tympanum, they might take on a severe form of inflammation, and adjacent structures might then rapidly become involved. He would not dogmatically assert that all cases thus treated would take such a course, but he was fully convinced that in a large number of instances the cases would do better without them, and many times they did much harm. In a certain number of cases, an untoward course might be expected from the beginning of the attack.

The extension of this affection to contiguous parts, was divided for convenience of description, as follows: 1. Catarrhal inflammation of the air-cells of the mastoid; 2. Periostitis of the external auditory canal; 3, Periostitis externa. An extended account of the etiology, symptoms, and pathology of inflammatory conditions extending to parts contiguous to the middle ear, was given. It was thought that a differential diagnosis of the invasions of these conditions, and a knowledge of the diagnostic value of pain as a symptom, would do much towards a more rational treatment of aural diseases. The diagnosis of simple hyperæmia of the mucous lining of the mastoid air-cells was difficult, as the symptoms were not always different from those of middle-ear catarrh, but when the mucous periosteal lining was attacked there would be an increase of pain. The attack might be ushered in by chills, and the temperature and pulse, in severe cases, would be characteristic of acute inflammation, and the pains would be non-paroxysmal. The degree of pain was not always indicative of the gravity of the disease. Inasmuch as acute middle-ear inflammation was liable to take on a severe form, it was desirable to prevent this by treatment, and it was thought this could be done by milder measures than those commonly in vogue. It was commonly believed that syringing and poulticing were harmless. Both were liable to a great deal of harm, and the relief afforded by leeches might be more than compensated for by the irritation caused by their sharp bites, and the bungling efforts made in stopping bleeding after they dropped off. The large coagula entangled in pellets of cotton-wool used to arrest hæmorrhage, were also liable to irritate the parts, especially in children. Blisters and the tincture of iodine applied over the mastoid, or in front of the ear, were not without their evil effects, and instillations of astringent injections were often very injurious. Inflations of the tympanum were sometimes both painful and harmful. The propriety of attempting to increase the acuteness of hearing in any acute case, was questioned. These procedures might transform a simple acute, purulent inflammation of the middle ear into one of more or less severity, or, at least, protract the disease very much.

Some years ago certain neglects on the part of patients, and certain accidents led Dr. Sexton to make observations in regard to the efficacy of milder measures in the treatment of these cases than those commonly used. Pursuing this line of study some general or constitutional remedies were brought to his notice, the use of which had been very satisfactory. Rest was important; that is, the inflamed organ should be but little disturbed by local applications at first. If the patient was seen before the ear discharged, and the drum-head was found inflamed, but not greatly bulged out by pressure of secretions, it should not be subjected to any treatment whatever. If thickened and more resisting and violently distended, the question of paracentesis presented itself. Under these circumstances he had been accustomed to give the patient the benefit of the doubt, when any existed, and upon the whole, he had not regretted the postponement of the operation. It was well known that the drum-head gave way, when not thickened, without any one being conscious of the fact, before a serous discharge appeared. Even in adults the operation was not always easy to perform, and in weak and debilitated persons, and especially in children, an anæsthetic was usually required. He was not in the habit of performing the operation without getting a good view of the drum, for when there was swelling of the inner extremity of the external auditory canal to such an extent as to prevent inspection, we were warranted in concluding that the pain depended upon other causes than distention of the membrane, namely, an inflammation of the periosteal coat of the canal. When the ear began to discharge, gentle wiping with absorbent cotton-wool was preferable to syringing. Later, when the secretion became more viscid, syringing was sometimes advisable in order to cleanse the canal. In the meantime attention to remote influences was demanded, otherwise the local treatment would be ineffectual. In the beginning, when the discharge was slight, boracic acid with calendula, was sometimes most efficacious. It was applied in the dry state, a small quantity being introduced and allowed to come in contact with the drum-head, and there remain until carried away by the discharge, when it should be re-applied. When the discharge was excessive this was still beneficial but not so satisfactory. In the author's experience the healing effect of this preparation had been very well shown. By such measures patients would sometimes get well in a week, or less time. In the greater number of cases recovery did not take

place so rapidly, and constitutional treatment would be required.

There were some remedies which had not been generally adopted in the treatment of aural inflammation that had, in his hands, proved to be of great value. One of the most important of these was *calx sulphurata*, or sulphurated lime. Dr. Sexton first used this some six years ago in furuncular disease, and the results were so gratifying that he published them in the *American Journal of Otology* for January, 1879. Experience had confirmed the statements then made. He had found it to exert a more favorable influence over acute aural inflammations than hitherto obtained by any other treatment. After explaining the action of the remedy, he stated that he gave it in doses of one-half grain, repeated every three or four hours, and seldom found it necessary to increase the dose. A smaller dose was sometimes preferable, especially in children. He preferred to use it in the form of gelatin-coated pills, unless it was desirable not to administer a pill, or when a smaller dose was indicated. For this purpose the triturations of "*hepar sulphur*" of the homœopathists were satisfactory. So gratifying had been his results in the use of this drug, that he had not felt called upon to leech patients for years, however severe the inflammation. He was rarely obliged to use the knife for the relief of inflamed tissues anywhere about the ear, unless for the evacuation of large collections of pus already formed.

In periostitis externa, where pus threatened to form, he regarded the usual operation of cutting down to the bone, for the relief of this condition, as not only unnecessary for the cure, but also a cruel infliction on the patient, and likely, in many instances, to aggravate existing conditions. The early use of calcium sulphide usually relieved all symptoms very promptly. Sometimes, though the inflammation yielded, the pains continued. They were not constant, were worse at night, and seemed best borne when the patient was sitting up or walking about. For the relief of these pains there were several remedies which should be tried before resorting to the use of powerful anodynes, such as morphia. The latter, when employed excessively, interfered with nutrition. The remedies alluded to were aconite, gelsemium, and pulsatilla. These might be employed in varying quantities from a drop to a minute portion of that dose, given every few minutes, or every few hours, according to the age of the patient and the urgency of the symptoms. Pulsatilla seemed to act best in acute aural disease of children. The effects of the other two drugs seemed to be about the same, though it would sometimes be found advantageous to give one first and afterwards the other. When the inflammation extended to the cells of the mastoid, the effect of sulphide of calcium was most beneficial. When used early, the more serious consequences of inflammation were not often observed. He had never been obliged to employ the trephine, nor had he ever seen any results that caused him to regret that this radical procedure had not been adopted. He thought, when periostitis externa was attended with much pain, that patients were sometimes subjected to unnecessarily severe treatment—to operations which neither always relieved the pains, nor prevented brain trouble. The existence of pain was not always sufficient to indicate the necessity of trephining, for it was not always pathognomonic of extension to the brain. The results of this operation were by no means as harmless as one might be led to think from its simplicity. Dr. Sexton thought the operation had been needlessly performed in many instances. It was difficult to understand how pain could always be relieved by it, especially when cerebral disease arose from direct transmission from the middle ear, or from previous absorption from mastoid disease; and when neuralgic pains had their origin in other parts, relief was always improbable. No necessity for considering the advantages of the operation had arisen in his own practice. In caries of the mastoid cells, it was important to maintain a free opening, and to remove loose sequestra.

Dr. C. H. BURNETT, of Philadelphia, being introduced by the President, and requested to open the discussion, remarked that he could endorse all the author of the paper had said, in so far as his experience went. There were some points mentioned, however, in which he had no experience. Many times neuralgic conditions might be mistaken for inflammatory conditions. He had seen some cases in which, when the surgeon came to operate, there was added to the original complaint, an artificial disease, if he might so speak, as a consequence of the operation. These were probably among the most important cases of aural disease with which we meet. Dr. Burnett had had an opportunity of studying the natural history of mastoid disease, both when it was allowed to run its natural course, and when it arose from traumatic influences. As an example of the first class of cases, he would cite one which came under his observation several years ago. He was asked to see a physician, having what he thought to be middle-ear disease. None of the five physicians present were willing to operate. The patient was recovering from pneumonia, and complained of pain and deafness in one ear. Upon inspection, the drum-head was found to be bulging, and he thought required incision. The patient begged off for a day, and on the next morning it was found that perforation had taken place, which resulted in an amelioration of these symptoms for a time; but afterwards, the more severe symptoms of mastoid disease developed. The speaker was absent from the city several days, but from the attending physician, and from carefully-kept notes by the patient's wife, he learned that the case had passed through the regular course of mastoid disease. No operation was done further than keeping the membrana tympani open by frequent punctures, as requested by the patient. Finally there was a discharge of purulent matter, such as is frequently found coming from the cortical cells through the mastoid portion. The probe revealed an entrance into the cavity an inch and a half from the point of its insertion; it passed through bone. This was a case which was not operated upon, though it perhaps should have been. Dr. Burnett thought the patient recovered by a process of natural relief. He was now perfectly well, and had no trouble in his ear. Another case, not so severe, was detailed. A gentleman, after bathing, gave evidence of inflammation in the tympanic cavity, and of mastoid disease. The drum-head was opened, and a little mucus came out, but there was no relief of pain. Wildes's operation was suggested, but owing to the miscarrying of messages, the case was not seen for several days, and the patient recovered without operation.

As an example of cases arising traumatically, he would cite the history of a young man in the Presbyterian Hospital in Philadelphia. The patient was twenty-four years of age, and was a brakesman. He was found in the car in an insensible condition, with an extensive injury of the left ear. There was an immense wound, extending through the auricle and mastoid canal, and there was facial paralysis. At the end of two weeks he suddenly recovered consciousness, but the paralysis remained the same. He complained of intense headache upon the left side, which was the injured side. The wound was an inch and a half deep as viewed from the auricle, and one could look through the large opening into the mastoid cavity. A piece of bone, evidently a mastoid sequestrum, was taken out. The wound healed rapidly, and the hearing became

very good, though not quite normal; but the facial paralysis remained unaltered. The piece of bone was taken out behind the auricle, and was evidently a piece of the posterior wall of the auditory canal. Running through it was a canal, evidently a portion of the facial canal somewhere above the mastoid foramen.

The speaker had never used sulphide of calcium except in one case of furuncular disease of the ear, occurring in a strong, robust man of thirty years of age. In this case entire cessation of local treatment was recommended. The patient recovered, and had no further recurrence of furuncles. He believed, however, as stated by the essayist, that in this substance we had a valuable remedy as a resolvent. He wished to inquire whether the administration of this drug should be confined to those patients who were of full habit, or whether it was to be given as well to cachectic and debilitated subjects.

Dr. ROOSA remarked, that he found nothing to criticise in that portion of the paper which treated of the etiology of aural diseases, except, perhaps, that the author laid more stress upon reflex influences than most aurists did or had done. He considered the recommendations in regard to the treatment of necrosis and removal of granulations to be sound surgical practice; but with regard to all the rest of the paper—with regard to the administration of the sulphide of calcium, pulsatilla, and abstinence from surgical interference—he was so impressed with the unsoundness of the essayist's doctrines, that he felt some embarrassment in speaking. He had been taught that free vent should be given to pus, that swollen and inflamed periosteal tissue should be incised, and he had found in his practice that this teaching was correct. As regards the action of sulphide of calcium, he had tried it in circumscribed inflammation of the external auditory canal, and in diffuse inflammation, but he had never known it to influence the progress of the disease. He had never dared to try it in acute tympanic inflammation. He would endeavor to formulate the principles of practice to which he still adhered, and which he had already expressed in a public way, and which he did not believe had been overturned. Given a red membrana tympani, a *serious* pain referred to the ear, he believed that unless speedy relief was afforded by the warm douche, there was no remedy to be compared, as yet, to leeches. He believed if the drum-head be bulging, it was much safer and quicker, although many patients got well without it, to incise it with a needle. He admitted that there were mastoid inflammations that needed no incision. He remembered an instance of this, where he was somewhat reluctantly persuaded to defer operating for a short time, and the patient recovered in a few days, but this class of cases was very limited. He was very far from thinking that every case of aural disease was to be attacked with leeches and the knife, but he did believe there were many cases in which local antiphlogistic measures, and the use of the knife were required. He found a marked resemblance between the recommendations contained in the paper and the teachings of homœopathists; they might be correct and they might be wrong. As yet, he could not believe that the principles of surgery had been turned upside down, as it seemed the essayist thought, inasmuch as he did not now see cases which required the use of leeches and the knife. He would state further, that he knew of many instances of patients having been treated with the sulphide of calcium, and who had finally been obliged to resort for relief to leeches and the knife.

Dr. O. D. POMEROY thought almost as Dr. Roosa thought, and differed almost totally from the author of the paper. He could hardly speak without heat, in attempting to combat propositions which seemed so extraordinary and monstrous, to wit, the non-opening of abscesses, the non-use of morphia to relieve pain, and the non-use of measures for the unloading of engorged blood-vessels. These well-established surgical principles seemed, according to the author of the paper, to have become of very little, if any use. The doctor had spoken of leeching as a violent measure, and likely to do harm. Leeching need not be a violent measure, and American otologists did not put six or eight leeches upon the ear. They had found one or two to be sufficient, so that the plea of depletion from their use would not do. In regard to the leech-bite, he would say that he thought it was clean cut, harmless, and almost painless. He thought the essayist was right in saying that harm might be done by bungling efforts in arresting hæmorrhage after leeching. He had observed this in several cases, and even applied leeches himself to avoid it. If there was decided acute hyperæmia of the tympanic cavity without any relaxation of tissue, the leeching could not possibly do harm. When hyperæmia of the tympanum was associated with passive congestion, he had known a dragging pain to follow leeching. This, he thought, was due to drawing blood from neighboring parts, but this was only a theory. Such pain, however, could at once be relieved by opium. He had himself had otitis too many times not to be conscious of the complete, speedy, and welcome relief afforded by leeching and opium. He wanted to say something about syringing. He admitted, if plain water (unsalted) was thrown into the tympanic cavity, it might do harm, but when the ear was properly syringed it could do no harm. The mildest application of cotton to the ear might produce worse results than proper syringing. In acute inflammation of the tympanum, when there was an excess of pressure and soreness, inflation caused pain and aggravated the case, and ought not to be done. But in acute inflammation, the drum might be quite sunken, and would require inflation. In chronic conditions, inflation was practised as a matter of course. Some years ago he published a paper bearing upon the question, as to whether redness of the drum membrane was evidence of inflation. He found, after many experiments, that in some cases there was redness of the drum membrane produced, and in others not. Hence, as there was a certain degree of violence in inflation, it should only be used to the extent necessary to keep the hearing up to the highest pitch. He believed he had not done Wildes's operation in over a year, and thought it rather unnecessary and cruel. Many times when the mastoid was red and swollen, and pitted on pressure, he relieved this condition by leeching. The essayist had found it advisable, in most cases, to postpone paracentesis, and when performed in nervous patients, or children, that an anæsthetic was necessary. Dr. Pomeroy thought that the point raised by Dr. Roosa in regard to this matter, was absolutely impregnable. He considered the operation simple. It might be done every day or two, if necessary, as Dr. Burnett has suggested. Except in the children, he thought an anæsthetic unnecessary. He was astonished almost beyond limit, by the author's statement that he had not resorted to the use of leeches in acute inflammation, for two years. He knew that much might be accomplished by other means, but it seemed impossible for him to handle certain cases without them. The essayist had spoken of frequent relapses. The speaker was in the habit, under such circumstances, of leeching his patients repeatedly. He remembered a case of catarrh of the Eustachian tube. The patient had a heavy, dull pain. He was leeched once in three or four days, and every time the hearing came up almost to the normal point. He had never used the sulphide of calcium. His assistant, however, had repeatedly employed it, and had found it to be of no avail whatever.

Dr. DAVID WEBSTER thought his own experience, for the most part, coincided with that of others, as recorded in books, namely, that these cases of chronic suppuration of the middle ear, which were so difficult to deal with, and which we did not always succeed in curing, even after the most protracted and diligent course of treatment, all originated in acute inflammation; and in a vast majority of instances, the acute trouble had had no treatment. Owing to the greater prudence on the part of patients, many more of these cases now came under treatment in the acute stage than formerly, and he failed to remember a single instance where an acute inflammation of the middle ear had been treated, from the first, according to scientific methods, as laid down in the books, that had resulted in chronic inflammation of the middle ear. He thought the general experience of aural surgeons would bear him out in this statement. There was no disease more amenable to proper treatment than acute middle-ear inflammation. He had had no personal experience in the treatment of these cases with pulsatilla, or sulphide of calcium. He wished to say, however, that he knew patients recovered with a useful organ under the old method of treatment, and that, in many cases, without treatment, the acute inflammation was followed by chronic inflammation.

Dr. SEXTON, in closing the discussion, replied first to the inquiry of Dr. Burnett, respecting the use of sulphide of calcium. Of course, age and habit did make a difference, but he had seen no case in which he had not felt justified in giving it. He thought, that since otologists had taught that the drum membrane must be punctured, and the mastoid perforated, practitioners had got into the habit of operating too often. He did not say he would never use these measures, but he did say that he had not found occasion to do so; and he did not believe that he would permit patients to suffer unnecessary pain. He was surprised at his colleague's statement, that the remedies recommended were homœopathic. Certainly all these remedies were used by other members of our profession, and in varying doses. As regards patients who had been treated with sulphide of calcium going to other practitioners for relief, he did not think that was a proper subject for discussion.

CORRESPONDENCE.

LOSS OF HEARING DUE TO PURPURIC EXTRAVASATION.

To the Editor of the Medical News:

SIR: Will you kindly give me space to report in brief a case of some interest and extreme rarity? I was consulted on October 21, by Mr. T. M. C., of Laurenceberg, Ky., who reported that on the morning of the 14th he awoke and found that he could not hear any sound on the right side. The condition was accompanied by no dizziness, or pain, or other symptom. The tuning-fork being placed on the head or on the teeth, the sound was not conveyed to the affected ear, as is the case in conditions in which there is trouble of the sound-conducting apparatus, and to an ocular inspection there appeared to be no deviation from the condition of health. By the aid of these facts we were enabled, whatever be its nature, to locate the disease in the course of the auditory nerve, either before or after its entrance in the cochela. In our attempts to discover an assignable cause, or determine any possible constitutional condition, we found that the patient was subject to attacks of purpura, and that he had had an eruption about the time when he noticed the loss of hearing. This gave us a clue as to what the probable etiology was, and upon the supposition that there was a hæmorrhagic extravasation in the cochlea, or about the auditory nerve, the prognosis was rendered favorable. Without any other treatment than an active saline cathartic, his hearing began to improve on the ninth day from that on which he lost it, and on the twelfth day it was as perfect as it had ever been.

I notice this case because it is one of extreme interest, and because a report of a similar case has never come within my observation.

I am, sir, yours truly,

A. E. PRINCE, M.D.

JACKSONVILLE, Ill.

NEWS ITEMS.

CINCINNATI.

(*From our Special Correspondent.*)

SMALL-POX.—Vaccination has never been so generally practised as during the past few months, since the appearance of variola in our midst. Cases of small-pox have appeared in all parts of the city, but most numerously in the German quarters, where considerable opposition to vaccination is encountered. The most discouraging feature of this ignorant opposition, is that a few so-called physicians are found to encourage it. Nearly three hundred cases have been reported thus far. The law requiring the physician in attendance to give notice thereof to the board of health is very generally and promptly complied with. For neglecting so to do, one prominent physician was recently arrested and fined.

CLINICAL FACILITIES.—As in other affairs, so also in medical education, competition results in benefit to the public. In addition to utilizing the vast amount of material at the city hospital—where all the colleges are represented—the schools all have their own free dispensaries, and one of them a hospital of its own, where clinical lectures are delivered by the faculty. The schools here pride themselves upon their facilities for clinical instruction. In addition to all these features, the Medical College of Ohio has established a lying-in ward in the college building. From this ward two women were taken into the amphitheatre a few weeks ago, and delivered by the professor of obstetrics in the presence of over three hundred students. These two cases happened to occur on the same day, and their peculiarities (one requiring delivery by forceps, the other being a case of prolapse of the funis), rendered that day's clinic a memorable one to the students present.

PITTSBURG.

(*From our Special Correspondent.*)

SMALL-POX.—Owing to the laxness which characterizes the enforcement of the law compelling vaccination—a very efficient law, by the way, which has not in a single instance been vindicated by a prosecution for non-observance of its requirements—we are in the midst of a local epidemic of small-pox, with the Municipal Hospital (for small-pox patients only) filled to repletion, and eighteen to twenty new cases reported daily, besides other cases of varioloid secretly cared for by friends, and not reported to, or sought out by, the health authorities.

CANADA.

(*From our Special Correspondent.*)

THE HAYVERN MURDER CASE has excited our local alienists, and caused a good deal of discussion in the medical journals. Hayvern, a convict, stabbed a fel-

low-prisoner, against whom he had a grudge. The defence raised the plea of insanity, though there were no positive signs of mental disturbance either at the time or subsequently. It is interesting to note, as showing to what lengths some mad-doctors will go, that the principal symptoms relied upon by the defence were, a low temperature, some cutaneous anæsthesia, and sleeplessness. In spite of the strenuous efforts on the part of the Irish Catholics to obtain a reprieve, the law took its course, and the man was executed.

THE NEW CITY HOSPITAL, Hamilton, Ont., is rapidly approaching completion. It consists of two pavilions, with a central administration building, and will accommodate about one hundred patients.

TORONTO GENERAL HOSPITAL. — Under the able management of Dr. O'Reilly, the Toronto General Hospital has become, in many respects, a model one. Certainly in the matter of Xmas decorations it is unrivalled by any institution which we have visited either in this country or in England.

BUREAU OF VITAL STATISTICS.—A deputation, headed by Dr. Fenwick, President of the Canada Medical Association, recently waited on the Dominion Premier to urge the government to the establishment of a Bureau of Vital Statistics.

PUBLIC HEALTH.—Typhoid fever of a mild type still prevails in the cities and towns. Diphtheria is very prevalent in some of the country districts.

LONDON.

(*From our Special Correspondent.*)

THE question that is exciting most interest in professional circles in this country at the present time is that of vivisection. Those of your readers who attended the International Medical Congress will remember what a large share of attention this subject then received and what a strong expression of feeling was elicited on it at the closing general meeting. The aggressive action of a Society for the Protection of Animals from Vivisection has again brought the matter to the front. Perhaps it may be well to put your readers in possession of the history of this question in its legal aspect.

The first attempt to fetter physiologists and pathologists in their vivisectional investigations was made by the Society for the Prevention of Cruelty to Animals, who prosecuted some members of the British Medical Association for conducting experiments at the meeting of that Association, in Norwich, in 1874. The experiments were designed to illustrate the action of absinthe. The prosecution broke down; but this public action gave considerable stimulus to the agitation then rising against vivisection, and in 1875 a Royal Commission was appointed to inquire into the subject. In 1876 "An Act to Amend the Laws Relating to Cruelty of Animals" was introduced into the House of Commons, and after some slight but important amendments was passed through both houses, received the Royal assent, and became the law. The provisions of this Act are in the main these: That no experiment calculated to give pain, or inflict a serious injury, may be performed on any living vertebrate animal, except by a person holding a license from the Home Secretary, and in a licensed place. An anæsthetic must be employed during the whole duration of the experiment, and the animal must be killed before the effects of the anæsthetic have passed off. Should it be essential to the experiment in question that anæsthetics be not used, or that the animal should be allowed to recover from their effects, then a separate and special certificate for this purpose must be obtained. The dog, cat, horse, ass, and mule are specially exempted from vivisectional experiments, unless it is shown that the object of any experiment will be frustrated unless performed on them. The applications for licenses and certificates have to be signed by a president of one of the medical corporations and a professor in medicine, physiology, etc., in some British University.

At the time this Act was passed no decided and united opposition to the whole Act was offered by the medical profession. It is now clear that such would have been the proper course to pursue, and that it would have been far better than any attempts to amend the Act in a manner favorable to experiments. Evidently the effect of this Act depended entirely upon the manner in which it was to be worked, and although the then Secretary of State was free with his protestations that it was not intended by it to throw difficulties in the way of scientific research, it has in practice been so carried out that that has been its sole result. Licenses have been refused and granted only so tardily that the opportunity for carrying out the desired investigations have been lost; special certificates have been refused, and in general the restrictions and annoyances of the law have proved so great that nearly all scientific research through vivisection has been stopped throughout the country. Such men as Lister, Ringer, Ferrier, and Fraser have in this way been prevented from continuing their important investigations in this country.

The intensity of the opposition to this form of scientific research has been well illustrated this week. During the meetings of the Congress the function of the cerebral cortex was discussed in the physiological section, and Prof. Goltz described some experiments on dogs, from which he deduced that the cortex acted as a whole. Dr. Ferrier joined in the discussion and detailed another series of experiments performed on monkeys, which showed that different parts of the cortex cerebri had different junctions. Subsequently about one hundred physiologists met at King's College Laboratory and inspected a dog of Goltz's and two monkeys, on whom Dr. Yeo had operated many months before, one of which was deaf and the other partly paralyzed on one side. Dr. Ferrier spoke and pointed out how the condition of these monkeys supported his views. A summons was taken out against him for this, and counsel attempted to prove that because Dr. Ferrier had examined these monkeys and compared them together, he had conducted an experiment with them which he was not entitled to do without a license, and that he had been a party to keeping the animal alive after the anæsthesia had passed off. The magistrate quickly dismissed the summons. Evidently the case for the prosecution is absurd in the extreme, but its importance lies in the clear indication it gives of the way in which physiologists are hampered in their attempts to unravel the mysteries of life. It is hoped that some action may be taken to induce the Home Secretary to carry out the Act in a more liberal spirit, and not to alter it in some of its details. It is to be hoped that in the United States science will be allowed to work untrammelled by such restrictions; but should occasion arise, never give any quarter to antivivisection agitation, or consent to be burdened in any restrictive act.

BELL'S INDUCTION BALANCE AND THE DETECTION OF BULLETS.—At the Hospital of the University of Pennsylvania, on Dec. 21, Prof. Agnew gave Mr. Gleason, of Boston, an opportunity to demonstrate the operation of Bell's Induction Balance (see p. 46) upon patients, in whom bullets had been imbedded for years. The apparatus was the same as was used in the case of President Garfield, with some added improvements. The experiment was conducted before the medical class, and in the presence of a number of interested medical men. In one case the bullet had been received nineteen years

ago, and was supposed to be lodged somewhere in the arm. After explaining the *modus operandi* of the apparatus, a careful search was made over the patient's whole arm and shoulder, but entirely without success. Several times Mr. Gleason exclaimed, "There, there it is!" but after all, had to give it up.

The second patient was a negro, who had been shot in the left buttoch. In his case also, the apparatus failed to give any information. It seemed to show something after Drs. Agnew and John Ashhurst, Jr., had found a spot, when they felt with their fingers what they thought might be an encysted ball; but even then the coidence was too doubtful and inconsistent to be of any value. Besides the disks, the insulated needle was used, thrust deep down to where Dr. Agnew thought he felt the ball, but even this brought no response.

The experiment proved of no use as an aid to determining the location of the missiles in these two cases; though it was easy to hear the modification of tone in the telephone when the disks were passed over Mr. Gleason's cheek, while he held a bullet in his mouth, or when the needle was thrust against a bullet buried buried in a piece of raw beef. In a case under the care of Dr. Hamilton, the apparatus detected a ball in the anterior wall of the chest, but that was very close to the surface.

After the conclusion of the experiments, Dr. Agnew made an exploratory incision back of the trochanter major, which disclosed that the bullet was not there.

CAUSE OF THE IMPURE WATER IN BOSTON.—Prof. Ira Remsen, according to the *Boston Medical and Surgical Journal*, December 1, has found on the screen at the effluent gate of Farm Pond, one of the water suppliers of Boston, moss-like matter having the same peculiar nauseous smell as the water in Boston, and which, on investigation, proved to be a fresh-water sponge, the *spongilla fluviatilis*. It is probable that this decaying substance is the principal cause of the trouble.

THE BOSTON MEDICAL LIBRARY ASSOCIATION has issued an appeal for further subscriptions, being desirous of raising fifteen thousand dollars for the purpose of cancelling the entire debt, making some pressing and long-neglected repairs, and having a small fund for binding and for buying new books as soon as issued. The appeal is signed by Dr. Oliver Wendell Holmes and others, and will doubtless receive a liberal response from the citizens of Boston, who are well known for the liberal manner in which they foster literary and scientific objects.

NEW YORK STATE BOARD OF HEALTH.—The regular quarterly meeting of the New York State Health Board was recently held at Albany. The means for preventing poisonous adulterations of confectionery were discussed. A committee was appointed to represent the Board at the meeting of the Public Health Association. Various plans, having for their object the supply of pure vaccine virus, were discussed. The committee on the Hunter's Point odors reported that the great majority of the manufacturers have taken measures to abate the nuisances, in accordance with the Governor's proclamation, and that the effluvia are by no means so offensive as they have hitherto been. Measures will be promptly taken to close a few refineries, which are still the source of harmful emanations.

IOWA STATE MEDICAL SOCIETY.—The thirtieth annual meeting of this Society will be held at Des Moines on January 25, at 10 A.M., and will continue three days. The annual address will be delivered by T. J. Caldwell, M.D., President of the Society. A large number of papers have been promised for the meeting.

POST-GRADUATE INSTRUCTION IN PHILADELPHIA.—At the University of Pennsylvania there will be given, during the spring of 1882, a course of instruction by clinical methods, intended for practitioners and recent graduates. The plan includes teaching upon general medicine, nervous diseases, otology, dermatology, ophthalmoscopy, gynæcology, operative surgery, and venereal diseases, by Profs. Pepper, Wood, Strawbridge, and Duhring, and Drs. Bruen, Risley, Baer, and White. The object of this course will be to supplement the regular instruction given during the winter months, and, more especially, to afford physicians desiring to extend their acquantance with special branches, an opportunity of doing so in a most practical manner, and at a season when they can, perhaps, best spare the time.

As there has been abundant evidence of the need and desire for such instruction among the profession in all parts of the country, it is hoped that the general effort which is being made in this direction, not only here, but in several parts of the country, may deserve and meet with success.

THE MEDICAL SOCIETY OF VIRGINIA held its twelfth annual session at Old Point Comfort, Va., on October 10th and 11th. The following officers were elected for the ensuing year: *President*, Dr. G. Wm. Semple, of Hampton; *Vice-Presidents*, Drs. W. L. Robinson, of Danville; W. D. Cooper, of Morrisville; J. S. Apperson, of Town House; Wm. B. Gray, of Richmond; T. James Taylor, of Walton, and S. B. Morrison, of Brownsburg; *Recording Secretary and Treasurer*, Dr. Landon B. Edwards, of Richmond.

The next meeting of the Society will be held at Fauquier White Sulphur Springs, Va.

NEXT INTERNATIONAL CONGRESS.—A meeting of 250 physicians was held at Copenhagen on Nov. 28, at which a resolution was adopted approving the proposal to hold the next International Medical Congress, in 1884, at Copenhagen, and proffering a cordial welcome by the Danish medical profession to their brethren from foreign countries.

THE UNITED STATES PHARMACOPŒIA.—The revision of the *Pharmacopœia*, we are informed, is nearly completed. The work will make a duodecimo volume of from 400 to 450 pages. The mode of issuing it must be very soon considered and decided. The copyright will be disposed of, no doubt, in accordance with the instructions, on the best terms obtainable. The manner of inviting proposals for the publication of the work has not yet been determined. It is probable, however, that those who think of competing for the copyright may obtain the information desired by applying to the chairman of the "Committee of Revision," Mr. Charles Rice, Bellevue Hospital, New York.

MAURY COUNTY MEDICAL SOCIETY.—This society has recently organized at Columbia, Tenn., with a large membership, by the election of the following officers: President, Dr. J. H. Wilkes; Vice-President, Dr. Robert Pillow; Secretary, Dr. John Bowen; Treasurer, Dr. J. E. Dixon; Censors, Dr. Wm. B. Harrison, J. Spencer Hill, and C. W. Winn.

FEMALE MEDICAL STUDENTS IN PARIS.—Great consternation prevails among the students in Paris at the decree of the Minister of the Interior, which, it is said, will shortly be published, according to lady medical students the right to compete for the House Surgeonships, hitherto denied to them. The agitation seems to be principally on the ground that the men can no longer have the house to themselves, but will be restrained by the presence of ladies.

SMALL-POX.—Information received from various parts of the country indicate the wide-spread and rapidly increasing prevalence of small-pox. In the State of Michigan we learn that it is reported at Bay City, Detroit, Grand Rapids, Kalamazoo, South Haven, and Union City. The one new case at Grand Rapids was believed to have been brought from North Carolina. The case at Union City was brought from Cincinnati. At Kalamazoo the disease was probably contracted by sorting paper-rags. At all of the six localities from which small-pox is reported, it is believed to be under the control of the local health authorities.

DEODORIZING IODOFORM.—M. Catillon, in the *Gazette Hebd. de Méd. et de Chir.*, Nov. 4, 1881, describes a successful mode of removing the repulsive odor of iodoform. It suffices to add to the iodoform, in a bottle in which it is preserved, some fragment of Tonquin bean. The odor then becomes no longer recognizable, and recalls that of bitter almonds. It lasts for many days, even when the iodoform is withdrawn from the bottle and exposed to the open air.

RUPTURE OF THE BLADDER.—The *Lancet* for November 12, 1881, contains an interesting article, mainly historical, on the subject of rupture of the bladder.

Among the predisposing causes of this injury alcohol is mentioned as producing at the same time a rapid secretion of urine and a condition of diminished sensibility of the mucous membrane, both of which tend to produce a condition of distention without which rupture is impossible. It is also shown that the distended bladder may be ruptured through violent contractions of the abdominal muscles.

LITERARY NOTES.—*Vratchebrinya Vedomosti*, a Russian medical journal, publishes a translation of the able address of Dr. Billings, before the late International Medical Congress.

It is stated that the Transactions of the late International Medical Congress, in four royal 8vo volumes, of 600 pages each, are ready for delivery to members. Another proof, if one were wanting, of the ability and unceasing energy of the Hon. Secretary-General, Sir William MacCormac. Members desirous of obtaining their copies should apply immediately to Mr. Kolckmann, No. 2 Langham Place, London, W., enclosing a remittance of five shillings to cover postage. Copies may be obtained by non-members at £2 2*s.*, or separate volumes at 10*s.* 6*d.* each. Volume I. contains List of Members, General Meetings, General Addresses, Museum, Anatomy, Physiology, Pathology, Materia Medica, and Pharmacology. Vol. II., Medicine, Military Surgery, and Medicine Surgery. Vol. III., Ophthalmology, Mental Diseases, Diseases of the Skin, Diseases of the Throat, Diseases of the Ear, Diseases of the Teeth. Vol. IV., Diseases of Children, Obstetric Medicine and Surgery, State Medicine. These volumes are in paper covers, but may also be had in fine bindings at an additional cost, ranging from £1 10*s.* per volume for best polished morocco, with bronze Congress medal in the front cover, to half calf at 4*s.* 6*d.*

Gray's *Anatomy* has been translated into the Chinese language, and published in six volumes at Foochow.

Fordyce Barker's *Puerperal Diseases*, and T. A. Emmett's work on *Gynæcology* have been translated into the Dutch, and Dr. Costa's *Diagnosis* into the German language.

APPOINTMENTS.—The Board of Trustees of the University of Louisville, have appointed Dr. Theophilus Parvin, of Indianapolis, to the chair of Obstetrics and Diseases of Women, made vacant by the death of Dr. Crowe. The university may be congratulated on the addition to its faculty of so distinguished a gynæcologist, and so eminent a teacher as Prof. Parvin.

The Faculty of the College of Physicians and Surgeons, of Baltimore, Md., have called Dr. Richard Gundry, to occupy the chair of Materia Medica, Therapeutics, and Mental Diseases.

Dr. Lewis S. McMurtry, of Danville, Ky., has accepted the chair of Anatomy in the Kentucky School of Medicine, in place of Dr. Cook, who has removed to San Francisco, Cal. Dr. McMurtry will remove to Louisville.

Dr. J. Forsyth Meigs has resigned the position of Visiting Physician to the Pennsylvania Hospital, and Dr. Arthur V. Meigs has been elected to fill the vacancy.

Dr. Louis Elsberg, of New York, has been elected Professor of Laryngology and Diseases of the Throat in Dartmouth Medical College, and he has resigned the clinical lectureship on the same subjects, which he held in the University of the City of New York.

PERSONALS.—The Royal Society of London have conferred the Copley medal, the highest distinction in their power, on M. Würtz, the eminent French chemist, for his valuable contribution to science.

M. Pasteur has been elected to the seat in the French Academy made vacant by the death of M. Littré.

It is proposed to place a marble bust of Mr. Erichson in University College, London, as a mark of respect for his long connection with, and great services to, the School of Medicine of that College.

Virchow has been made an honorary member of the Universities of Bologna and Kasan, as well as of the College of Physicians in Vienna and the German Society for Public Hygiene in Berlin. Dr. B. F. Leonard has been appointed Professor of Physiology; Dr. W. R. Monroe, Professor of Materia Medica and Therapeutics; Dr. H. L. Byrd, Professor of Obstetrics and Diseases of Women and Children; Dr. H. Froehling, Professor of Chemistry, Toxicology, and Medical Jurisprudence in the Baltimore Medical College.

Dr. J. R. Chadwick has been appointed Instructor in Diseases of Women, and Dr. E. H. Bradford Special Instructor in Orthopœdics in the Harvard School.

CONSIDERABLE currency has been given by the medical and lay papers to the story that immediately after the assassination of President Garfield Professor Gross volunteered his professional services at the White House, and that they were declined. Even at this late date we find the report still obtaining currency through the press, and we deem it due to the distinguished surgeon in question to say that we have the best authority for stating that the story is utterly without foundation.

DIED, at Hastings-on-the-Hudson, on January 4, JOHN W. DRAPER, M.D. Dr. Draper was born at St. Helena, near Liverpool, England, on May 5, 1811. He received his early education in England, and came to this country in 1833, where he continued his chemical and medical studies, commenced at the University of London, in the medical department of the University of Pennsylvania, where he took the degree of M.D. in 1836. Soon after graduation he was appointed Professor of Chemistry, Natural Philosophy, and Physiology in the Hampden-Sidney College, Virginia. In 1839 he was called to the chair of Chemistry and Natural History in the University of New York, and in 1841 he was appointed Professor of Chemistry in the University Medical College, where he was long President of both the scientific and medical departments.

Dr. Draper's numerous and valuable experimental researches were published in the *American Journal of the Medical Sciences*, *London and Edinburgh Philosophical Journal*, and the *American Journal of Science and Arts*. He was likewise the author of many literary

works and reviews: *A Treatise on the Forces which Produce the Organization of Plants* (1844); *A Text-Book on Chemistry* (1846); *A Text-Book on Natural Philosophy* (1847); and one on *Human Physiology* (1856), which passed through numerous editions. His *History of the Intellectual Development of Europe* appeared in 1852, and was almost immediately afterwards republished in England, and translated into French, German, Italian, Polish, and Russian, and has passed through many editions in this country. In some respects, his most important work was the *Conflict between Science and Religion*, which attracted great attention, and was translated into all the principal languages. He was also the author of *A History of the American Civil War*, and *Thoughts on the Future Civil Policy of America*.

In 1874, the American Academy of Science conferred the Rumford medal, the highest distinction in their gift, on Prof. Draper, for his researches on *Radiant Matter*.

Dr. Draper was one of the most eminent scientists and philosophical thinkers our country has produced, and history will probably accord to him high and enduring fame.

Dr. Draper had two sons, both distinguished in science—Prof. Henry Draper, the eminent spectroscopist, and Prof. Daniel Draper, who is well known as a meteorologist.

——, on November 25, Prof. WILHELM BUSCH, in the fifty-fifth year of his age. Prof. Busch was a student and assistant of Johannes Müller, and in 1848 took part in the Schleswig-Holstein war, where his aptitude for surgery was developed under the guidance of Langenbeck. In 1855 he was elected Professor of Surgery in the University of Bonn, and was Surgeon-General of the Prussian army in 1866–70. His earliest works related to comparative anatomy, and the later to surgery, in which his writings on the subjects of the influence of the mechanism in inflammation and dislocation, the mechanism of strangulated hernia, and gun-shot wounds are the best known. Prof. Busch recently received the great Cross of the House of Hohenzollern, with an autograph letter from the Emperor, in gratitude for a successful operation performed on the Empress.

The death of Dr. NIKOLAUS PIROGOFF is announced by telegram from St. Petersburg. He was Professor of Surgery to the Medico-Chirurgical Academy in St. Petersburg, and a member of the consulting staff of several hospitals in that city. In 1840, he brought out a valuable treatise on the division of the tendo-Achillis in orthopædic surgery. He also wrote on cholera, on the surgery of the arterial trunks and of fasciæ, and on the medical aspects of the Caucasus, and on topographical anatomy. His work on this last subject forms a fine atlas of anatomy, as illustrated by frozen sections. It is, however, with military surgery that his name will ever be most closely associated. He is the medical historian of the Crimean and Circassian campaigns; and also wrote a report on the permanent and improvised military hospitals in Germany and Alsace-Lorraine during the war of 1870. The late Professor is probably best known to Englishmen in association with one of the numerous methods of partial amputation of the foot. —*British Med. Journ.*, Dec. 10, 1881.

NOTES AND QUERIES.

PENNSYLVANIA RAILROAD COMPANY'S INSTRUCTIONS FOR EXAMINATION OF EMPLOYES AS TO VISION, COLOR-BLINDNESS, AND HEARING.

MR. FRANK THOMSON, General Manager of the Pennsylvania Railroad Company, has issued the following instructions, under which examinations will be made on each division of the road, as soon as practicable, of all employés in positions where they are required to use or be governed by signals. Persons will not be appointed to such positions until they have satisfactorily passed similar examinations. Employés failing to come up to the required standard, will have the privilege of a professional examination by experts designated by the General Manager.

Instructions for Examination as to Vision, Color-Blindness, and Hearing.—The examination will be made by, or under the direction of the Division Superintendent, and will be as to vision, color sense, and hearing, and the following apparatus will be used:

1. A card or sheet of large letters for testing distant sight. 2. A book or card of print for testing sight at a short distance. 3. An adjustable frame for supporting the print to be read, with a graduated rod attached for measuring the distance from the eye while reading. 4. A spectacle frame for obstructing the vision of either eye while testing the other. 5. An assortment of colored yarns for testing the sense of color. 6. A watch with a loud tick for testing the hearing. 7. A book or set of blanks for recording the observations. 8. A copy of an approved work on "Color-Blindness."

Acuteness of Vision.—For distant vision, place the test card in a good light twenty feet distant, and ascertain for each eye separately, the smallest letters that can be read distinctly, and record the same by the number of that series on the card.

Range of Vision.—For near vision ascertain the least number of inches at which type D = 0.5 or 1½, can be read with each eye and record the result.

Field of Vision.—Let the examiner stand in front of the examined at a distance of three feet, and directing the examined to fix his eyes on the right eye of the examiner and keep them so fixed, let the examiner extend his arms laterally, and opening and shutting his hands, let him by questions satisfy himself that his hands are seen by the examined, without changing the direction of the eyes; recording the result as good, or defective, as the case may be.

Color Sense.—Three test-skeins—A, light green; B, rose; C, red;—will be used with the colored yarns attached to the stick; of the latter there are forty tints, numbered from 1 to 40, and arranged in three sets—a, b, and c—of which the odd numbers correspond to the colors of the test-skeins, whilst the even numbers are different or "confusion colors."

The first set is to test for color-blindness; the second to determine whether it be red or green blindness, and the third to confirm the opinion formed from the first or second test.

Place the test-skein A at a distance of not less than three feet, and without naming the color, direct the person examined to name the color, and to select from the first twenty tints, or set (a) of the yarns on the stick, ten tints of the same color as skein A, stating that they do not match, but are different shades of the same color. Record the number of the tints so selected. Do the same with skeins B and C, using for B the tints from 21 to 30, and for C the tints from 31 to 40. If the odd numbers are selected readily, the examination may be gone over very quickly.

When color-blindness is detected, any one of the even numbers or "confusion colors" may be used as a test-skein, and the man may be directed to select similar tints, when he will most probably choose odd numbers, which should be recorded, stating the number on the stick of the confusion color used for a test, and then giving the numbers chosen to match it.

Then a soiled *white* flag should be shown, and the man be directed to select tints to match it, which should be recorded; next a *green*, and finally a *red* flag.

All of the particulars are to be recorded as the examination proceeds, not leaving it to memory. Use the numbers in recording. The letters indicating the set need not be used. Note whether the selection is prompt or hesitating by a distinct mark after the proper word on the blank form. When deficient color sense is discovered, and variations in the mode of testing are made by the examiner or examined, they should be noted under remarks, or on a separate sheet to be referred to, if the blank has not room enough.

Hearing.—Note the number of feet or inches distant from each ear at which a watch, having a loud tick, is heard distinctly, using a watch without tick, or a stop watch, to detect any supposed deception; and the number of feet at which ordinary conversation is heard.

Explanations.—The test-card contains letters, numbered from 20 (xx) or D = 6. to 200 (cc) or D = 60. Those measuring three-eighths of an inch, and numbered 20 (xx) or D = 6. are such as a good eye of ordinary power sees distinctly twenty feet or six metres distant. If a man sees distinctly only those marked C (or 100), his acuteness of vision, V, is equal to $\frac{20}{100}$ or $\frac{1}{5}$. If he sees XX (or 20). then V is equal to $\frac{20}{20}$, or 1, and his sight is up to full standard, This mode of statement indicates the relative value of the sight examined, and should be used in the records. If one eye is $\frac{20}{20}$, or 1, and the other not less than $\frac{20}{50}$, or $\frac{1}{2\frac{1}{2}}$, with or without glasses, the sight may be considered satisfactory.

The power of discerning small objects at the reading distance is tested by the small print, and good sight may be assumed if one eye can see at twenty inches the matter marked 1½ or D = 0.5, whilst the other distinguishes not less than 4½ or D = 1.5. The small print should then be brought to the point of nearest vision for each eye, and that point mentioned in inches. A good eye should be able to read No. 1½ at twenty inches, and have a *range of vision* up to ten inches.

The color test will indicate whether the man is deficient in color sense. The colors are arranged in three sets, one of 20 and two of 10 each—the odd numbers are the colors similar to the test-skeins, and the even numbers are the "confusion colors," or those which the color-blind will be likely to select to match the sample skeins or colors shown him. The first 20 (a), numbered from 1 to 20, have green tints for the odd numbers or test-colors. In the second (b), 21 to 30, the test-colors are rose or purple, a combination of red and blue; and the third (c), 31 to 40, they are red. Ordinarily the test will be with each set separately, but the whole 40 may be employed on any test-skein. Anything but *green* matched with *green* indicates a defect in the color sense for which use set (a).

The test with the second set indicates whether red or green blindness exists. The odd numbers from 21 to 30 are purple. If either of these is matched with test-skein B, nothing is indicated, as they must appear alike to a color-blind person; but if blue is chosen, red blindness is indicated, and if green, then green blindness is established.

The third set (c) is scarcely needed, but may be used in confirmation of, or in connection with, the last, as to red or green defect.

When the numbers of the tints selected are recorded in the proper blank, color-blindness will be indicated in those instances where even numbers appear, and suspicions will arise where numbers beyond 20 are used with test-skein A, and under 21 or beyond 30 with B, and below 31, with C.

Further tests should be made of those found to be color-blind with the usual signal flags, requesting them to name each color shown singly, and to match the colors of them from the tints on the stick, and with colored lamps; and finally to state what they understand them to mean as signals.

It will be well not to dwell on the examination of a man found to be defective in color sense or in vision, but to pass over each examination with the same general care, and afterwards send for those giving indications of defects, to come in singly for fuller examination. The examination should be private as far as practicable, especially excluding persons who are to be subsequently examined.

Inability to name color accurately, or to distinguish nicely as to difference in tint, is not to be taken as an evidence of color-blindness.

In testing as to hearing, if a person who has a good ear hears the watch used at five feet distant, and the person examined hears it only at one foot, his hearing would be 1-5, and may be recorded in fractions. Conversation in an ordinary tone should be heard at ten feet.

It should be understood that all employés examined, failing to come up to the requirements of the above standard, shall be accorded the benefit of a professional examination. When acuteness of vision is below the standard adopted, it may be possible to restore full vision by proper glasses, when it is due to optical defects, known as near-sight, far-sight, or astigmatism, or by other medical or surgical treatment, and useful men may then be retained in the company's service.

TO THE EDITOR OF THE MEDICAL NEWS.

SIR:—I have read with interest the editorial on "Free-trade in Medicine," in your issue of January 7, and was glad to learn of the pleasant way in which an English contemporary speaks of our native medical literature. I cordially agree with your statement that direct control of medical education by political boards is at least at present not desirable, but that "flagrant irregularities" should be corrected. I am rather surprised, however, at your conclusion that our "free development and successful progress" are owing "to our system of free-trade in medicine." With the highest admiration for the achievements of American physicians, and for their justly esteemed contributions to medical literature, I am yet totally unable to see in what manner the so-called "free-trade" which exists here has stimulated their labors or improved the character of their productions, and, therefore, how your conclusion is justified by the premises.

It is true that we have been successful, and, as a profession, have much to be proud of, but it has been *in spite* of many serious hindrances and mortifying obstructions, due, it appears to me, largely, if not altogether, to this very lack of restriction which, as we all know only too well, has permitted thousands of incompetent men to enroll themselves in our ranks, and to compel us to bear the burden and the shame of their ignorance. This, to my mind, seems the direct outcome of our "free-trade," which to a greater or less extent is responsible for the absence of preliminary training, the short terms of study, the easily gained diplomas—in brief, the defective medical education—which, I am glad to say, is rapidly ceasing to be a source of discredit and of opprobrium to the profession in America. Very respectfully,

J. WILLIAM WHITE.

PHILADELPHIA, Jan. 10, 1882.

[Our correspondent appears to have mistaken the purport of the editorial to which he refers, viz., the question of governmental control of medical education. We did not assume to analyze the causes of our "successful progress," but simply to call attention to a point which had been noted by an English contemporary. While we have no doubt that our medical progress has been impeded by the causes our correspondent mentions, that was not a point under consideration. With our political system, we believe it is unquestionably better for medical education not to be made the subject of political control, and in the editorial referred to, while we expressed distinct approval of "appropriate legislation," we equally distinctly expressed disapproval of paternal legislation, which, history teaches, even under the best civil service, ultimately hinders the advance of knowledge.—ED.]

TRANSACTIONS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THE Pathological Society of Philadelphia desires to sell the surplus volumes of its transactions, and offers them at sixty cents per volume, postage free. Copies may be obtained of the Treasurer, Dr. French, 1423 Walnut Street, Philadelphia.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM DECEMBER 2, 1881, TO JANUARY 3, 1882.

MURRAY, ROBERT, *Colonel and Surgeon, Medical Director, Military Division of the Missouri.*—The leave of absence granted him in S. O. 100, October 5, 1881, Military Division of the Missouri, is extended two months.—*S. O. 272, A. G. O., December 2, 1881.*

SUMMERS, JOHN E., *Lieutenant-Colonel and Surgeon, Medical Director, Department of the Platte.*—The leave of absence granted him in Par. 6, S. O. 123, Department of the Platte, December 1, 1881, is extended one month.—*S. O. 135, Military Division of the Missouri, December 28, 1881.*

ALEXANDER, R. H., *Major and Surgeon.*—The leave of absence granted him in S. O. 215, September 19, 1881, from A. G. O., is extended one month.—*S. O. 285, A. G. O., December 17, 1881.*

MCCLELLAN, ELY, *Major and Surgeon.*—Relieved from duty at Fort McHenry, Md., to proceed to Fort Trumbull, Conn., and relieve Assistant Surgeon, W. H. King.—*S. O. 224, Department of the East, December 15, 1881.*

KING, W. H., *Captain and Assistant Surgeon.*—When relieved by Surgeon McClelland, to repair to Fort McHenry, Md., and report for duty at that post.—*S. O. 224 c. s., Department of the East.*

HAVARD, V., *Captain and Assistant Surgeon.*—Now *en route* from Fort Davis to San Antonio, Texas, assigned to temporary duty at Headquarters Department of Texas, and to report to the Medical Director for instructions.—*S. O. 154, Department of Texas, December 12, 1881.*

PERLEY, H. O., *Captain and Assistant Surgeon.*—Having reported in person at these headquarters, will report to the commanding officer, Fort Columbus, N. Y. H., for duty, as assistant to the post surgeon, and attending surgeon at these headquarters.—*S. O. 224 c. s., Department of the East.*

RAYMOND, HENRY I., *First Lieutenant and Assistant Surgeon.*—Relieved, temporarily, from duty at Alcatraz Island, Cal., and to report to the commanding officer of the Presidio of San Francisco for duty at that post.—*S. O. 214, Military Division of the Pacific and Department of California, December 9, 1881.*

MADDOX, THOMAS J. C., *First Lieutenant and Assistant Surgeon.*—Having completed the duties assigned him under S. O. 248, November 3, 1881, from A. G. O., will report in person to the Surgeon-General, U. S. Army.—*S. O. 238, A. G. O., December 15, 1881.*

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the "News" should be addressed to No. 1004 Walnut Street, Philadelphia.

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

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ORIGINAL LECTURES.

CLINICAL LECTURE

ON SOME OF

THE ABUSES OF THE DRAINAGE-TUBE.

BY STEPHEN SMITH, A.M., M.D.,

SURGEON TO BELLEVUE AND ST. VINCENT HOSPITALS, NEW YORK.

GENTLEMEN: The drainage-tube has become one of the constant appliances in the treatment of wounds, abscesses, and tissues undergoing suppurative inflammation. In passing through the surgical wards of an hospital, one can but be struck with the frequency with which they are met. They protrude from every abscess, in whatever stage of healing it may be; from wounds of every grade; from open joints; from compound fractures; from areas of cellulitis. If we inquire as to the reasons for using them under these varying conditions and circumstances, we learn that they are placed between the surfaces of the fresh wound, to prevent the accumulation of septic fluids; that they are left in abscess cavities to drain away fluids and to admit the washing out of the cavities; that they are passed through inflamed cellular tissue to drain off pus, and allow the injection of disinfectants.

If we examine critically as to the conditions under which the tube was first applied, we shall find that in many instances, had the wound been properly treated, no septic fluid could have accumulated, and that the tube was the only thing which made the collection of such fluid possible. If, again, we examine individual cases under treatment, we shall find that, in a surprisingly large number, the drainage-tube has not only long ceased to drain away septic matters, but has itself become a source of irritation, and is perhaps the only obstacle to the rapid healing of the wound. The drainage-tube, therefore, though an instrument of great value when properly employed, is undoubtedly capable of doing much mischief when used without proper discrimination. It is of great importance to commence its use with correct ideas as to the precise circumstances and conditions to which it is adapted. In the first place, let me say that the drainage-tube can serve but two useful purposes, viz., 1, as a drain of fluids from a cavity; and, 2, as a medium for the injection of fluids into a cavity. It should be added that it may act in this twofold capacity in a single case. When, however, it ceases to be useful in one or the other of these functions, it has ceased to be useful at all, and its further employment is harmful. Now let us apply these principles to practice in the cases which have passed under your observation in this hospital.

In incised wounds, the tube should never be used when the two surfaces can be brought accurately together and maintained in apposition. This may seem a needless piece of advice, and yet I do not doubt that you have seen it used in just such cases, and perhaps many times. In the removal of tumors large flaps are often formed, and as they are raised up it seems quite impossible to bring the opposing surfaces accurately together; and yet with a little care they can be adjusted, and with careful padding maintained in apposition for the brief period necessary to their union. It is simple carelessness and negligence on the part of the surgeon who allows the surfaces to separate so that a dêpot is formed for the accumulation of fluids, which necessitates the use of the tube. And I am quite sure that the popularity of the drainage-tube is such with many surgeons that they would place it between the surfaces of the wound without even raising the question as to their ability to secure immediate union by properly adjusting the external dressings. But the difference in the time of healing wounds capable of accurate adjustment, treated with and without the tube, is very great; in the former case, the tube acts as an irritant, and the wound may not, at the best, heal in several weeks, while in the latter, union may be perfected in forty-eight hours.

To thrust a drainage-tube into such a wound and maintain it there for the purposes of drainage and the injection of disinfecting fluids, is, to say the least, very improper practice. Consider, therefore, in every incised wound, whether you cannot so adjust and maintain the opposed surfaces that no open space can exist.

In amputation wounds the tube is now generally thrust into the bottom of the wound, and some surgeons allow it to pass completely through the base of the wound. There it is often maintained in position long after all danger has passed of the accumulation of fluids, as an irritant, preventing the final closure of the wound. Now in the larger number of amputations the flaps should be so formed as to place the angle of separation at the most dependent part. This position admits of the most perfect drainage of the wound without the interposition of a tube, or tent, or other irritating body. But even if a tube is deemed immediately necessary, it should only penetrate to the bone, where a cavity may exist if the flaps are not well supported. If the flaps are made antero-posteriorly, the lines of separation being transversely, the tendency to the accumulation of fluid within the flaps is increased. In this case the tube may prove useful for a few days; but it is usually possible to place the stump in such position that the drainage is direct. If that is done, the tube is either useless or needs to be employed but for a day or two. It should also be borne in mind that an amputation wound may heal without suppuration if the flaps are properly supported at every point, and no foreign substance intervenes.

In abscesses unconnected with diseased bone, the drainage-tube is frequently, if not generally, used much too long. The usual method of treating cold abscesses is to puncture, introduce the drainage-tube, and daily throw carbolized injections into the cavity through the tube, which is allowed to remain sometimes for months. The rule should be to dispense with the tube as soon as we are satisfied that the cavity is free from septic matters, which may follow the first injection. Then all that is required is apposition of the opposing surfaces, and union of the granulations will rapidly take place. Apposition is secured by uniform external compression. In many cases these abscesses may be perfectly obliterated in five or six days by the following method: Puncture the sac and evacuate the contents, introduce the tube, and holding the edges of the puncture firmly about it, inject a carbolic solution three per cent. strength until the cavity is over-distended; allow the fluid to escape, and inject again until the escaping fluid is colorless; now remove the tube, carefully adjust wet carbolized sponges, squeezed as dry as possible, over the entire surface of the abscesses, and bandage them firmly in position. The effect is to cleanse the cavity of all septic matters, and then to press the walls of the abscess gently and firmly together. Union of the two walls is often completed at a single dressing, retained

four or five days. If the abscess is inflamed, the tube is often useful in securing drainage from recesses which otherwise would retain decomposing fluids. But there comes a limit to the time when the tube is useful for drainage, and should only be employed to throw injections into the deeper parts which would not be reached by the ordinary force of the syringe.

Through-and-through drainage has latterly been recommended and practised in open wounds, suppurative cellulitis, suppurating joint cavities, compound fractures, etc. This method of drainage is often of very doubtful utility, and is certainly liable to great abuses. The alleged object of this treatment of wounds is to prevent inflammation by the direct antiphlogistic properties of carbolic acid applied to the surface of the wound. The tube, having fenestræ cut in it, is therefore passed completely through the wound and out at the opposite side, and the treatment consists in injecting a solution of carbolic acid through the tube several times daily, thus constantly medicating the internal surfaces of the wound by the injected fluid. It matters little on what theory this application of carbolic acid is made, for it is very liable to be abused when employed by means of through-and-through drainage-tubes. Carbolic acid can do no possible good when frequently applied to a fresh, healthy wound, but must prove an irritant which will prevent union. The drainage-tube passed through the deeper parts of such a wound is a source of irritation simply, without any other function. It is alleged that there are cavities in the deeper parts of wounds which must be drained and washed out; but the very existence of such cavities in fresh wounds too often proves that the requisite adjustment and compression of the flap or flaps was not made. The early passage of a drainage-tube through the wound of a compound fracture, and out at some unbroken part, in order to prevent inflammation, is productive of more harm than good. It may convert, when performed early, a compound fracture, which by proper means might have been made a simple fracture, into one of the most intractable wounds which we have to treat. And even if tubes are passed during the suppurative stage, it is questionable if they are nearly as efficacious as incisions into the suppurating cellular tissue, followed by injections of carbolic solutions. In suppurating cellulitis, it is advised to pass the drainage-tube through the area involved and out at a point beyond; through this perforated tube the injections are thrown for the purpose of disinfecting the cellular tissue and draining away accumulating pus. In general, drainage-tubes do much more harm than good in this disease. They add a new cause of irritation, and as they are frequently continued for a long time, they not only aggravate the acute stage of the affection, but prolong the period of recovery. The only instance in which through-and-through drainage can be useful in cellulitis is where there is a large cavity of pus which cannot be drained except by a counter-opening; and it is doubtful if this method is superior to the old one of a direct counter opening.

Many other examples might be added of the improper employment of the drainage-tubes; but they will be apparent on giving you a rule for its use. As a rule, then, use the drainage-tube only to remove from cavities fluids liable to undergo putrefactive changes if retained, and to cleanse such cavities by the injection of disinfectants. There are abundant uses of the tube for these purposes. Wounds will frequently allow depôts of purulent matters to form in spite of all our care, and these must be early drained and cleansed. Abscesses are often so placed that we cannot compress them after evacuation, but must drain and disinfect their cavities until they heal by the slow contraction of their granulations. Cellulitis may result in the formation of large collections of putrid fluids, which can best be removed by the tubes, through which the cavity can only be effectually cleansed. Inflamed joints present natural cavities which may require cleansing and drainage.

The impression which I wish to leave upon your minds is this, viz.: that the drainage-tube has certain definite uses, and when so used is of great practical value, but that it is very liable to abuse by a failure to discriminate as to the cases to which it is adapted, and the time in any given case when its usefulness ceases.

ON THE

INFECTIOUS CAUSES OF INFLAMMATION.

Two Lectures delivered at the Pathological Institute of the University of Leipsic, December 8 and 9, 1881.

BY PROF. JULIUS COHNHEIM.

LECTURE I.

(Reported for the MEDICAL NEWS, by special permission of the Author, by Dr. WALTER MENDELSON.)

GENTLEMEN: If we now turn to infection as a cause of inflammation, those diseases which have long passed under the name of *infectious* will first occupy our attention. Without entering into an elaborate definition, I would merely say that, by infectious diseases, we understand such as are caused by the action of a poison, a virus—a virus which is not present at all times and in every place, but is produced only by certain persons who are themselves the subjects of the disease—in certain localities or at certain times or seasons. Two forms of the poison are more especially distinguished, the *contagious* and the *miasmatic*. Under the former is understood a virus which develops in individuals already ill—the *endogenous* form of Pettenkofer; while by miasma we understand one which originates in the soil, in the atmosphere, or in the water, that is, always outside of a morbid body, *i. e.*, exogenously. Contagious diseases, therefore, can only be transmitted from one person to another or from an animal to man, or *vice versa;* while miasmatic diseases appear in individuals who have never been brought in contact with others similarly affected. Measles, scarlatina, whooping-cough, small-pox, exanthematic typhus, relapsing fever, syphilis—all these are purely contagious diseases, while the malarial fevers, and, above all, the intermittent, are types of purely miasmatic disorders. Measles may be acquired in any locality only by coming in contact with one already ill of that disease; while, on the other hand, you may safely associate with a person having intermittent fever, and yet get fever and ague in a malarial district without ever having as much as seen any one ill of it.

There is a class of infectious diseases, however, which cannot be placed under either of these headings. In anthrax (splenic fever), we are familiar with a disorder most markedly contagious, and which never occurs in man unless transferred to him from animals. In animals, however, we find the disease appearing without their ever having come in contact with infected individuals, the poison originating undoubtedly in a certain locality in the soil, apparently spontaneously, and therefore to be classed as a miasma. Then there is a series of diseases which spread neither by direct personal contact nor from fomites, and yet which never appear in a place without a case having been previously introduced from without. Never yet has cholera broken out in a city without a case having been brought in first, nor has any one ever yet got cholera by direct infection from one ill of it. This class of diseases, to which I may also add typhoid fever, yellow fever, and epidemic dysentery, is called *miasmatic-contagious*, a designation which in itself shows that the generally accepted classi-

fication of infectious diseases does not yet include the true nature of the processes. Added to this is the fact that the group of miasmatic-contagious diseases is by no means small, and before very long we shall have to decide whether to include in it diseases which, heretofore, we did not know whether to call contagious or miasmatic, as, for instance, cerebro-spinal meningitis, erysipelas, mumps, acute articular rheumatism, lobar pneumonia, etc.

The names of the various diseases I have mentioned, gentlemen, will at once suggest to you the great variety of infectious processes which exist. The consideration of each would fall, however, under the domain of special pathology. All that interests us at this point is the fact that, in so many of them, inflammation plays such an important part. Erysipelas and epidemic meningitis are such typical inflammatory processes, that it is impossible, on anatomical grounds alone, to distinguish them from non-infectious inflammations of the skin and pia mater; and even where the chief symptoms of an infectious disease are not of an inflammatory nature, it is, nevertheless, nothing uncommon for intercurrent inflammations to occur; thus, the abscesses in pyæmia, and the numerous inflammations, both acute and chronic, in syphilis. You see, therefore, that in speaking of the process of inflammation as a whole, we are abundantly justified in seeking for the cause of infectious inflammations, or, from our standpoint, for *the reason why, in infectious diseases, the walls of the blood-vessels are affected.*

If we ask ourselves, then, what the nature of the poison is, I think we may from the first safely say that it does not exist in the vital fluids in a state of solution; for how can we conceive of a poisonous solution attacking the vessels of a certain part of the body only, and those frequently not the ones through which the poison was either originally introduced or finally eliminated? A second weighty factor in this consideration is the one that the different viruses of infectious inflammations, as of infectious diseases altogether, are capable of reproducing themselves to unnumbered multitudes.

As you all know, the contagious matter from the vesicle of cow-pox can be so indefinitely increased, by successive inoculations, that thousands of persons may be vaccinated from what was originally contained in one drop of the fluid. The same holds true of the contagium of measles, of scarlet-fever, of gonorrhœa, of syphilis, and other infectious diseases. What substance, I ask you, gentlemen, is there which, dissolved, should have such a power unknown to any chemical body? Many chemical bodies, it is true, have the property of becoming infinitely divided, as odoriferous substances, for instance, but in such cases the effects become less and less as the division increases. If it, therefore, be no solution, it must be a corpuscular poison which enters the body and increases in it. Already, in 1846, the idea of a *contagium vivum* was broached by Henle; but it met with no general acceptance, because, with the means then at command, the existence of such a body could not be ocularly demonstrated. There is nothing, perhaps, which better justifies the assumption of such a view than the history of trichinosis. In trichinosis we have a disease running a specific and typical course, and which was formerly thought to be and classified as a miasmatic fever. Now we know that trichinæ—highly organized living beings, which are transferred from one animal to another and from them to man—are the cause of the severe inflammations which occur in the muscles of infected individuals. In this case we know exactly the mode of the development of the infecting organism; we know how it is spread from the rat to the pig, and from the latter to man, and in what way the transfer takes place. Is the process any less one of infection on that account? And yet for years it was stoutly maintained that trichinosis was a *parasitic* disease, and that its origin, due to such gross organisms whose presence, if not form, can be seen with the naked eye, could not be compared to the subtle poisons which caused the ordinary infectious diseases.

But, gentlemen, I hope to be able to show you, a little later, that all infectious diseases are parasitic. If all infections depended on such easily seen organisms as the trichinæ, we would not have had to wait till to-day for the demonstration of the parasites. Numerous experiences, as I mentioned to you in the lectures on puriform thrombi and on traumatic inflammations, go to show that we have to seek for our causes among that great family of low organisms, the *Schizomycetes;* and, as a matter of fact, the investigations into the dependence of the infectious diseases on this class of microphytes have, during the last decade, been pushed in a manner which has yielded truly brilliant results.

Before going any further, allow me to draw your attention to a research, dating from this period, which has shed such a bright light on one of the most dangerous infectious diseases, that thereby the comprehension of the nature of all analogous processes has been vastly facilitated. I refer to anthrax, or splenic fever. Ever since the blood of animals affected with this disease has been found to contain hyaline, motionless, rod-shaped bodies, so-called *bacteridia*, or *bacilli*, endeavors have been made to trace a connection between them and it.

Davaine, who as early as 1850 discovered the bacilli, tried by inoculations to show that these were the contagium, and however convincing his experiments appear (and especially striking was the fact that, while the bacilliferous blood of pregnant animals was capable of inoculating, the blood of their fœtuses, containing no bacilli, was entirely harmless), still, other observers could not convince themselves that after every successful inoculation bacilli were found in the blood of the animal inoculated, and yet the blood of the latter still had the power to produce the disease. Furthermore, it was urged, and apparently on good grounds, that anthrax has an undoubted connection with certain telluric conditions, for it occurs endemically in certain localities with a moist soil. All the doubts, however, which still hung about the subject were dissolved, as if by magic, by the researches of Koch, of Breslau. He showed the natural history of the *bacillus anthracis* to be as follows: The rods—the bacilli—multiply with extraordinary rapidity in the blood, and other fluids of the living animal, by elongating and dividing transversely. In the blood of dead animals, or other suitable propagating fluids, the bacilli develop, in the presence of air and between certain limits of temperature, to long, undivided filaments, in each of which a single row of spores makes its appearance. These spores, again, under similar conditions of habitat, air, and temperature, become the original bacilli. Another and very important point which Koch showed was that the life of the bacillus itself is of short and uncertain duration, and that under no circumstances do they live more than a few weeks at the most, and also that comparatively slight changes of temperature, or drying them, or exposing them to the action of distilled water, kills them. The spores, on the contrary, have a remarkable tenacity of life. They may be heated to any temperature below that necessary to coagulate albumen; may be put into a four or five per cent. solution of carbolic acid, or into strong alcohol, or may be kept dried for years, without impairing their power of reproduction.

We may say, therefore, that fluids containing spores are always infectious; whereas fluids containing the rods are only infectious when these are in the stage of active development, consequently, anthrax may be spread in

two ways—in the first place, by a direct transfer of bacilliferous blood, or other fluid from an infected animal, to a cut or abrasion in a healthy animal or man, hence its *contagiousness*. The other way is, that from the bacilli in the blood of dead animals, buried as they usually are in shallow pits in the damp earth, spores are produced which remain capable of development for an almost indefinite period of time. When these, therefore, by being in the grass, or other objects where the cattle feed, gain entrance by slight wounds into the system, the disease is again produced, and in this case really from the soil, that is to say, by a *miasma*.

ORIGINAL ARTICLES.

THE INFLUENCE OF OPERATIONS UPON THE PROLONGATION OF LIFE AND PERMANENT RECOVERY IN CARCINOMA OF THE BREAST.[1]

BY SAMUEL W. GROSS, A.M., M.D.,
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THE convictions are steadily gaining ground that carcinoma of the breast is curable, and that it is primarily a local affection, and not the expression of a constitutional taint, dyscrasia, or diathesis. In favor of these views—which are held by Virchow, of Berlin, Billroth, of Vienna, Fischer, of Breslau, Esmarch, of Kiel, Nussbaum, of Munich, Volkmann, of Halle, Kocher, of Berne, Erichsen, Hutchinson, Sir William Gull, Simon, Moxon, Bryant, Arnott, Payne, Green, and formerly by De Morgan and Moore, of London, and by Gross, Parker, Peters, Neftel, Richardson, Moore, and McGraw, of the United States—the course of the disease shows that visceral tumors are preceded by signs of extension of the cellular elements of the growth into the adjacent tissues and by infection of the associated lymphatic glands; and they are, moreover, sustained by the results of surgical interference, the latter of which furnish the motive for this paper.

In view of the inevitably fatal progress of carcinoma of the breast when uninfluenced by operation, the great questions to be considered from the standpoint of pathological histology are, whether the knife prevents, first, local dissemination; secondly, lymphatic involvement; and, thirdly, the development of metastatic tumors?

1. The answer to the question—does surgical intervention prevent the invasion of the skin, connective tissue, muscles, and walls of the chest?—should be affirmative in a certain proportion of instances. Observation during life and during operations indicates that the adjacent tissues are infected in 90.82 per cent. of all instances; while of 395 cases in which this point could be traced, there was local recurrence, after removal, in 315, or 79.74 per cent. Hence extirpation precluded continuous invasion of the surrounding tissues in 10.08 per cent. of all cases, a proportion which approximates that of the permanent recoveries, as we shall see presently.

2. In regard to the second question—does extirpation prevent infection of the associated lymphatic glands?—the reply must be that it certainly does. Thus, of 657 cases, glandular implication was witnessed in 422, or 64.23 per cent., when the patient first came under observation. In all the axillary glands were enlarged, and along with these the supraclavicular glands were involved in 27, the infraclavicular in 5, and the cervical in 3. Of 114 operations in which this point is noted, the recurrent disease was seated in the glands in 46, or 39.31 per cent., or in 24.92 per cent. less than when the affection was not influenced by interference; and the fact is noteworthy that the glandular recurrence was more frequent by 19.64 per cent. when the breast alone was removed than when it was extirpated with the glands.

3. In replying to the third question, it should be remembered that metastatic tumors are not always developed. Thus, of 740 patients dead of carcinoma, in whom the disease pursued a natural course, or who had submitted to operation, contamination of the viscera was discovered in 303, or in 40 per cent., so that more than one-half succumbed from the intensity of the local disease and the pernicious effects exerted upon the general nutrition through the loss of blood, offensive and exhausting discharges, and suffering. Of the entire number, in 252 the case was not influenced by operation, and metastatic growths were found in 157, or 62.30 per cent., while of the 488 subjected to the knife, the disease had extended to the viscera in only 146, or 30 per cent. As the course of the disease when left to itself shows that metastases are absent in 37.70 cases out of every hundred, and as they are wanting in 70 out of every hundred of the patients dead after operation, it follows that operations prevent implication of the inner organs in 32.30 cases out of every hundred.

Having thus seen that local extension, reproduction in the glands, and the formation of metastatic tumors may be obviated by the removal of the breast, we are justified in inferring, first, that life may be prolonged, and, secondly, that a permanent recovery may be effected by surgical intervention.

1. In regard to the first deduction—namely, the extension of life—an analysis of 67 cases which pursued a natural course, indicates that the average life was 27 months. Of 224 patients, on the other hand, who died after interference with local or general reproduction, the average duration of life was 39 months; so that extirpation adds one year of life.

2. The question of permanent recovery after operation must be based upon the study of the typical course of the affection, which demonstrates that certain events which happen at certain times should determine the date at which a cure may be regarded as being assured. Volkmann[1] states that "if a year has elapsed after operation, and the most careful examination fails to detect evidences of local recurrence, enlargement of the glands, or visceral implication, we may begin to hope that a permanent result will be attained; and that a cure is generally assured if two years have elapsed, while it is rendered almost certain after the expiration of three

[1] Read before the New York Academy of Medicine, January 19, 1882.

[1] Beiträge zur Chirurgie, 1875, p. 325.

years." As I have pointed out elsewhere,[1] the average date of death from metastases is 31.2 months; and that local reproduction is witnessed in only one case out of every two hundred, after the expiration of three years. Hence, I assume, with Volkmann, that the result may be said to be final if the patient survives over three years without local or general recurrence after the last operation, or has died of some intercurrent malady under the same conditions. Of 524 cases of scirrhous, medullary, colloid, and atrophying carcinoma, in which the result is known, 57, or 10.87 per cent., or 1 in every 9.19, fulfilled these requirements, 53 being still alive at the date of the last reports. The average duration of life after operation was six years and five months, and the disease had existed, on an average, for seventeen months and a half before surgical intervention, so that the average duration of life was seven years and ten months. Of the cases which ran a natural course, only 1.5 per cent. survived six years; while of the cures, 31.57 per cent., or nearly one-third, were free from disease after the expiration of six years. In speaking of the duration of life after operation, Sir James Paget[2] says: "I am not aware of a single clear instance of recovery: of such recovery, that is, as that the patient should live for more than ten years free from the disease, or with the disease stationary." Applying this severe test, I find that 10, or 1 in 5.7, fulfilled this requirement, 4 being free from recurrence for between ten years and one month and ten years and ten months, 2 for between eleven years and two months and eleven years and nine months, 1 for twelve years, 1 for thirteen years and eight months, 1 for fourteen years and seven months, and 1 for fifteen years and seven months.

In connection with the 57 cures, there are several interesting points which are of the first importance in influencing the prognosis after operation. In 9 instances there was repullulation. In 6 there was one recurrence; in 2 there were two reproductions, respectively, in twelve months and four years; and in 1 there were three recurrences in four years. In these three cases the subjects were free from disease for three and a half, four and a half, and twelve years after the last operation; so that, as in sarcoma of the breast, recurrent tumors should be freely extirpated as soon as they appear.

Another practical point is that glandular implication is not a bar to operation. In 18, or nearly one-third, of the 57 permanent recoveries, infected axillary glands were removed, and in several of these cases there were nodules in the skin, and the upper layer of the great pectoral muscle was excised. Even if the glands be permitted to remain, it does not follow that the progress of the disease may not be arrested, as their enlargement may be due to irritative hyperplasia and not to carcinomatous degeneration. In 3 cases in which they were not interfered with the patients were free from recurrence, respectively, for five years and nine months, six years and one month, and ten years and ten months. Other interesting points in regard to the prognosis after operation are that recurrence is more frequent in the axilla, by 11 per cent., when the breast alone is amputated, than when the glands are simultaneously removed, and that reproduction takes place four months earlier after the former than after the latter procedure.

In this connection I may call attention to the fact that absence of glandular implication does not afford an absolute guarantee that secondary deposits are not already present in the viscera, since in one example out of every eight metastatic tumors are formed without the intervention of infected glands.

In the final cures the operation was practised when the affection had already existed, on an average, for seventeen months and a half, or when the skin, the connective tissue, and the lymphatic glands are usually implicated. Hence, it was not performed early, or at a period which is best fitted for insuring immunity from reproduction; nor was it by any means always complete. Thus, of 53 cases in which the extent of the operation is noted, the breast was amputated in 25, the breast was amputated and the axilla was cleaned out in 16, the tumor alone was extirpated in 10, and extirpation, with the removal of infected glands, was practised in 2. The disease had been observed for twenty-six months, and the recovery averaged six years one month and fourteen days, for the amputations of the mamma; it had existed for seventeen months, and the cure had lasted for five years and eight months, for the amputations of the mamma and removal of the glands; and its duration before operation was nine months and thirteen days, and the average life afterwards was five years, eight months, and seven days for the partial operations. Of the 53 cures, the 16 in which both the breast and the glands were removed are alone to be regarded as having been subjected to radical operations, since every possible source of local and general recurrence should be gotten rid of to constitute a thorough operation; and I now make it a rule to amputate the mamma with its investing fat and skin, search for any outlying lobules, dissect the fascia off the pectoral muscle, and open the axilla with a view to its thorough exploration, and the removal of any glands that may have escaped observation previous to interference. If the muscles are infiltrated, they should be cut away with a bold hand, and the wound, especially in the vicinity of vessels, along the lymph sheaths of which extension of the disease not infrequently takes place, should be seared with the hot iron.

If such unexpected results, namely, one cure out of every nine operations and one-fifth, are attainable by procedures of which seven-tenths must be regarded as inadequate to remove all affected tissues, what degree of success may we not reasonably expect from early and radical measures? As soon as women have learned that a permanent recovery may be anticipated when the disease is in its incipiency, they will apply sooner to the surgeon for relief, and there is every reason to believe that the ratio of cures will be greatly increased.

The results that I have indicated—and they are derived from the recent and trustworthy statistics

[1] A Practical Treatise on Tumors of the Mammary Gland, p. 164.

[2] Lectures on Surgical Pathology, 3d ed., p. 649.

published by Winiwarter,[1] Oldekop,[2] Henry,[3] and Estlander,[4] have not been attained without a very considerable mortality, since of the 602 operations, 104, or 17.27 per cent., were fatal from the immediate effects of interference. The rate of death is about 10 per cent. for partial operations; 7.69 per cent. for amputation of the breast, and 23.10 per cent. for amputation of the mamma and extirpation of the glands. Hence partial extirpations should be discarded, as they are more fatal, possibly from aiming at primary union, than removal of the entire breast, and as they hold forth little prospect for permanent recovery. The reason for the excessive mortality when the mamma and axillary glands are removed is to be found in the defective manner in which the axillary wound was managed in a large proportion of the cases. Thus of 187 operations of this description—and they constitute 68 per cent. of the entire number—Billroth[5] lost not less than 40, or 65 per cent. of the entire number of deaths, of which 25 were due to pyæmia and septicæmia, which were frequently combined with hæmorrhage from the axillary vessels, 3 were due to hæmorrhage alone, 11 to erysipelas, and 1 to pneumothorax from opening the pleural cavity. Instead of trusting to ligation of the divided veins, against which his early teachings had prejudiced him, he resorted to plugging the wound; but he states that since he has found that veins may be tied with impunity his results are improving. In the future I believe that the mortality from radical procedures will not reach 10 per cent., since of 17 cases—15 of which occurred in hospital practice—in which I amputated the entire breast and its coverings, removed the pectoral fascia, and opened the axilla, I have lost only one, the subject having been a fat woman, who was impressed with the idea that she would not recover. In 14 of these cases infected glands were extirpated, and in 3 large portions of the pectoral muscles were cut away.

From all the data contained in the paper, I believe that I am warranted in framing the following practical conclusions:

1. That surgical intervention in carcinoma of the breast tends to retard the progress of the disease by preventing local dissemination, implication of the associated lympathic glands, and the development of visceral tumors.

2. That local reproductions do not militate against a permanent recovery, provided they are freely excised as soon as they appear; and that lympathic involvement does not forbid operation, since infected glands were removed in more than one-third of the examples of final cure.

3. That the subjects are almost without exception safe from local and general reproduction if three years have elapsed since the last operation.

4. That the risk from operations is outweighed by the benefits which accrue from them, since they not only add twelve months to life, but also cure more than one-half as many patients as they destroy.

5. That all carcinomata of the breast, if there are no evidences of metastatic tumors, and if thorough removal is practicable, should be dealt with as early as possible by amputating the entire mamma and its integuments, dissecting off the subjacent fascia, and opening the axilla with a view to its exploration and the removal of any glands which were not palpable prior to interference.

[1] Beiträge zur Statistik der Carcinome, Stuttgart, 1878.
[2] Langenbeck's Archiv., Bd. xxiv, pp. 536 and 693.
[3] Statistiche Mittheilungen über den Brustkrebs, Breslau, 1879.
[4] Revue Mensuelle de Médicine et de Chirurgie, 1880, p. 585.
[5] Chirurgische Klinik, Wien, 1871–76, p. 268.

ON THE

TREATMENT OF POSTERIOR HYPERTROPHY OF THE INFERIOR TURBINATED BONES.[1]

BY FREDERICK I. KNIGHT, M.D.,
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WITHIN the memory of even the younger members of this Society, nasal catarrh was one of the "opprobria medicinæ." The physician felt annoyed at being asked to prescribe for it, and perhaps almost vexed with his patient for having such a thing. The patient deriving no relief from sniffing up salt water or chlorate of potash solution, soon took to empirical remedies, and the worst sufferers have usually faithfully tried all the vaunted specifics in turn.

Little real advance was made in the knowledge and treatment of this affection until the discovery of the use of the laryngoscope led to the illumination of the post-nasal region, and to the study and treatment of the upper air passages as a specialty. This special study has led to the knowledge that, as in the urethra, so in the nose, a catarrh is often kept up by a stenosis. Among the most common causes of obstruction of the nares, is hypertrophy of the turbinated bones, especially the inferior. This is, strictly speaking, an hypertrophy of the mucous and sub-mucous tissues, and not of the bone itself. Another common cause of obstruction, and of the continuance of a post-nasal catarrh, is hypertrophy of the adenoid tissue at the vault of the pharynx. Both of these forms of hypertrophy also very seriously affect the quality of the voice.

The removal of these hypertrophies constitutes one of the greatest advances yet made in the treatment of the affections of this region. Of the treatment of adenoid hypertrophy at the vault, I shall not now speak.

The hypertrophy of the mucous membrane of the turbinated bones may involve the whole bone, or may occur almost or quite exclusively on the anterior or posterior portion.

The anterior form is more accessible and earlier received successful treatment. In regard to it, I will merely say that if the hypertrophy is considerable, in whatever way done, whether by cutting or tearing or cauterization, the treatment of the redundant tissue must be *destructive*. Pressure and other means of producing absorption may give temporary relief, but in no way approximate a cure.

The special topic which I wish to introduce tonight is "Posterior Hypertrophy of the Inferior

[1] Abstract of a paper read before the Boston Society for Medical Observation.

Turbinated Bones," which requires different treatment from the anterior form. The hypertrophy here occurs in the mucous membrane, and in the erectile tissue of Bigelow, which is situated between the mucous membrane and the bone.

The symptoms produced by this condition are:

1. Obstruction to nasal respiration.

This may be so complete as to necessitate breathing through the mouth, with its well-known discomforts and evils.

2. Difficulty of removing catarrhal secretion, either by blowing the nose or by means of the douche or syringe.

3. Serious modification of the voice, production of the obstructed quality usually improperly called nasal.

4. Deafness produced either by direct pressure upon the orifice of the Eustachian tube, or by keeping up the catarrhal condition in the neighborhood.

5. Impairment of the sense of smell, although the olfactory nerve is not distributed to this bone, by stopping the draught through the nose, which seems to be necessary for the enjoyment of this sense, and indirectly by keeping up a catarrhal condition of the other bones and septum narium.

The only treatment which has proved at all efficacious for the removal of this condition, has been such as would actually remove a considerable portion of the hypertrophied tissue. Touching the posterior ends of the bones with nitrate of silver, fused on ingeniously devised instruments, with the aid of the rhinoscopic mirror, was a delicate operation, but did little permanent good. It gave, perhaps, a little temporary relief by a superficial action on the mucous membrane. Tearing away the mucous and sub-mucous tissues by means of strong forceps was a more efficient, but a very painful and barbarous, operation. The use of strong acids and the galvano-cautery are dangerous, on account of the proximity of the Eustachian tube and middle ear, and serious results have been reported from the use of the latter in this region.

The best instrument yet devised for the removal of this posterior hypertrophy of the turbi-

nated bones, is the wire snare of Dr. Jarvis, of New York, and made by Caswell, Hazard & Co. This instrument consists of two metal canulæ, the shorter sliding freely upon that part of the longer next the operator. The surface of the main canula occupied by the secondary one, is threaded for the movement on its surface of a milled-nut. No. 5 piano wire, which is very strong and capable of cutting through the hardest tissues, is passed through the main canula and attached to two pins on the proximal end of the smaller one. A slight indentation upon the small canula fits a corresponding surface on the large one. This arrangement prevents rotation of the secondary canula, and so overcomes the tendency of the wire to twist and become loosened from its attachment to the growth. The nut, when turned, pushes the outer canula before it, and thus draws home the wire noose in the inner.

Dr. Jarvis gives the following directions for its use: If there is difficulty in getting a good view of the parts on account of the tendency of the patient to gag, the soft palate may be tied up by means of a tape passed through the nares. Giving the wire loop a twist towards the side of the nose occupied by the growth, it is fixed by a turn of the nut, and passed into the nostril. The rhinoscopic mirror being held in one hand, the position of the wire loop in the posterior nares is carefully watched while it is steadily advanced with the other hand, until it is seen to encircle the growth. The tip of the wire loop has already by excavation been made to assume a point considerably to one side of the axis of the main canula; hence firm pressure is exercised upon the anterior part of the base of the growth by the end of the canula, and at the same time the apex of the wire loop is pressing firmly on its posterior border. On drawing the wire home, the tissue is cleanly divided, and, if not too large to pass through the nares, it will generally be drawn out clinging to the snare. Traction should be made very slowly, stopping at short intervals, in order that the hæmorrhage may be as little as possible.

Several questions will present themselves to one about to use this instrument for the first time:

1. Is there any danger, after having engaged a mass of tissue in the loop, of being unable to complete the operation, in other words, of getting stuck? It at once occurs to the mind that you can't go backward; can you always go forward? It seems as if there ought to be no difficulty of this kind; the wire is very strong, and in one case Dr. Bosworth cut through a hard fibrous tumor with it. Yet some gentlemen have found this difficulty, and their cases should be reported, in order that the least trouble may be recognized and guarded against. It would be a very awkward thing for the wire to break in the canula, or anywhere except at the apex of the loop; but if fresh wire is used, this is not likely to happen, for the wire is very tough.

2. How much pain is caused by the operation? Dr. Jarvis sets it down as very little. In my experience, after the introduction of the instrument, which is naturally somewhat painful, there is pain only when the screw is turned, then it is considerable. It is no more, however, than a patient who has suffered obstruction, will willingly stand to get rid of it.

3. How much hæmorrhage follows the operation? If only a few turns of the nut are made at once; so that an hour or two are consumed in the operation, the hæmorrhage is usually slight; if, however, the

operation is hurried, it may be profuse. If the palate is tied up previous to the operation, the tape could be used for drawing a plug into the posterior nares, if this should be deemed necessary. To illustrate this method of treatment, I will make a brief report of a case:

Miss A., a singer and teacher of singing, had suffered from post-nasal catarrh and obstruction for three years, the symptoms being much worse when the wind was east, and least troublesome in a south wind. The presence of flowers, especially of roses, excited violent fits of sneezing. The sense of smell was lost.

I have seen Miss A. at various times during the past three years, and prescribed various remedies for the relief of her symptoms. Last summer she appeared suffering from so much nasal obstruction as to very seriously affect the quality of the voice. On examination of the posterior nares I found them completely blocked by swelling of the turbinated bones, especially the inferior. There was also swelling of the mucous membrane of the septum.

It seemed imperative to undertake some radical treatment. I accordingly extirpated the posterior part of both turbinated bones, at different sittings, by means of the Jarvis snare.

With the first operation there was considerable hæmorrhage, the wire having been drawn home too rapidly, only twenty minutes having been consumed. At the second operation considerably more time was allowed, and the bleeding was much less. The relief to the breathing was immediate.

Recently the patient has experienced some obstruction from swelling of the posterior ends of the *middle* turbinates, which will probably require the same treatment.

A CASE OF POISONING BY SULPHATE OF MORPHIA TREATED BY ATROPIA.

BY C. F. KING, M.D.,
OF MANDAN, DAKOTA TERRITORY.

FRANKIE M., one of the "demi-monde," took fifteen grains of the sulphate of morphia with suicidal intent. I saw her about one hour after; symptoms as follows: Pulse very feeble and rapid, respirations labored and stertorous, pupils contracted. I at once gave her ten grains of sulphate of zinc, which produced free emesis. I then gave a large quantity of warm water and commenced walking her, and in about forty minutes gave her another dose of zinc, by which means I thoroughly washed out the stomach. About this time the lips became cyanotic, and there was complete insensibility, and the surface of the body was cold. I then gave, hypodermically, one-tenth of a grain of sulphate of atropia, and in about thirty minutes one-fifth of a grain more. The cyanosis soon disappeared, the pupils enlarged, the body became warm, and the respirations quite easy and natural, and I left her, about four hours afterward, resting quite comfortably. She made a good recovery, and thirty-six hours later was walking the street.

The treatment in this case was certainly heroic, but the condition of the patient seemed to demand it, and the result justified it. I have no knowledge of any case in which such large doses of atropia were administered.

HOSPITAL NOTES.

THE WESTERN PENNSYLVANIA HOSPITAL.

Service of W. F. DALY, M.D.

A CASE OF AGGRESSIVE MANIA, CONNECTED WITH PERSISTENT HIGH TEMPERATURE, IN TYPHOID FEVER, SUCCESSFULLY TREATED WITH THE COLD BATH.

KATE L., a stout, dark-complexioned Irish girl, an employé in the hospital laundry, engaged chiefly in washing the linen of typhoid patients, was brought into one of the wards with typhoid fever. In due time the "rose spots" made their appearance on the abdomen, sordes upon the teeth, dull, dusky countenance, diarrhœa (involuntary), and mental stupor. Temperature, 105; pulse, 130; respiration normal. No chest complications. Abdominal iliac tenderness, gurgling.

Treatment by four-drop doses tinct. aconite root and ten drops of iodine solution every three hours (10 grs. ad ℥i glycerin), with cold sponging. Under this treatment the pulse varied but little, and the temperature fell to about 104⅘ in evening, and was little below that in the morning, as shown by the temperature cards, and the mental stupor was superseded after five days by a maniacal condition of the most aggressive character and utter insomnia, notwithstanding the careful administration of thirty-grain doses of the bromide of potassium for the first day or two, until refused by the patient, who did not sleep for seven days and nights, the maniacal excitement consisting of biting the nurses who attempted to restrain her, wrenching the arm of one of the nurses, causing subluxation, throwing tumbler or pitcher at the attendants, absolutely refusing food and drink. The utter impossibility of nourishing, restraining, or keeping this patient clean, what with the involuntary alvine and urinary discharges and her constant maniacal condition, a straight-jacket was put on, and afterwards a broad soft belt around her trunk, with wristlets, and all fastened to the bed. Nourishment per enemata was not retained, nor were medicines, and the temperature keeping up with the pulse, she was fast exhausting herself. The prognosis concurred in by the house staff and Dr. Daly was that death must supervene before many days.

Hers was a case essentially proper to be treated by the cold bath, which was suggested and called into effect. The patient was placed in the bath at 98°, and during ten to fifteen minutes it was lowered to 50° or 40°, without at first having any perceptible effect upon the temperature more than a reduction of one and a fraction of a degree for the first week, but the patient slept a short time after each bath, given every three to six hours, according to exigencies. After six or seven days' persistent effort of this kind, the rectum was more retentive of nourishment. No medicines whatever were given, even by the bowel, after the baths were begun, and for two weeks no food was taken by the mouth. The aggressive mania returned regularly after the soothing effect of the bath wore off, and the rest and quiet as invariably followed the cold bathing.

The girl is now well, after about two months' illness, and able to leave the hospital.

Remarks.—This case occurring in a strong, young girl of nervo-sanguine temperament, and with all the typical conditions of typhoid fever, contracted doubtlessly from constant employment in washing the linen and clothing of other typhoid patients, was thoroughly saturated with the most virulent form of the "causis morbi," hence, with this persistent high temperature, the superheated blood being pumped rapidly through the brain, was probably all-sufficient to cause the maniacal demonstration of so persistent a character.

In the service among the typhoid fever cases serious

lung complications are the only conditions contraindicating the use of the cold bath in high temperature.

WORKHOUSE AND ALMSHOUSE HOSPITALS, NEW YORK.

CASE OF DERMOID CYST OF AN UNDESCENDED OVARY.

(Under the care of R. VAN SANTVOORD, M D., Visiting Physician to the Hospitals.)

THE following case is of sufficient rarity to be worthy of record:

In August, 1881, my attention was called to a woman, aged fifty (?) years, who had been admitted to the hospital on the previous day, suffering from some acute febrile disease. During the examination a tumor was felt in the abdomen, about two inches to the right and above the umbilicus. It seemed to be about as large as a fist, but could not be satisfactorily defined, owing to coexisting tympanitis. On palpation, a distinct and peculiar crepitation could be felt. Nothing was known of the history of the patient previous to the present illness.

The patient was rapidly sinking at the time of the examination, and died about twenty-four hours after it. On autopsy, the cause of death was found to be acute lobar pneumonia, involving the upper part of the left lower lobe. On opening the abdomen, a tumor with a smooth surface was seen projecting above the intestines in the position above indicated. The distended colon partly covered it in on the right side and above. The small intestines were crowded to the left and downward. On drawing back the intestines an oval tumor, about 6½ inches long and 3½ to 4 inches in diameter, was seen lying between the spinal column and the right kidney. The right Fallopian tube passed vertically upward from the uterus to the lower end of the tumor, with which what was evidently its fimbriated extremity became fused. There was no normal ovary on the right side. The os uteri showed the usual slight bilateral laceration indicative of former pregnancy. The uterus, left ovary, and Fallopian tube presented nothing abnormal. The tumor was behind the peritoneum. There were no adhesions to it of the surrounding viscera. It was attached over a considerable area of its posterior surface to the posterior wall of the abdomen by loose areola tissue. On section the walls of the tumor were found to be extensively calcified. A quantity of yellow, fatty fluid escaped, which quickly solidified to the consistency of butter. Several masses of long, light-colored, fine hair, matted together, were found. There were also fatty masses, probably made up of hair, epithelium, and fatty matter, more or less closely adherent to the inner surface of the cyst. This inner surface was covered with fully-developed cuticles. No other abnormalities were observed in the abdomen.

The location and anatomical relations of the tumor make it evident that it was to be regarded as a *dermoid cyst of an undescended ovary*.

Remarks.—According to Peaslee, three-fifths of all dermoid cysts are ovarian (129 out of 188 cases). He does not mention that any of these occurred in an *undescended* ovary. He refers to T. Safford Lee and J. F. Meckel (Peaslee on *Ovarian Tumors*, first edition, p. 84) as recording cases of dermoid cysts found "behind the peritoneum upon the posterior muscular walls of the abdomen." It seems possible that these cases might have belonged to this category. Schroeder (*Ziemssen's Clyclopædia*), Wells, Thomas, and Emmet make no allusion to the occurrence. Atlee (*Ovarian Tumors*, p. 188) records a post-mortem examination of a case of dermoid cyst, ten inches in diameter, "occupying mainly the umbilical region," and imbedded in folds of large intestine. All the surrounding viscera were closely adherent to it. No connection with the uterus could be traced, but from the absence of the left ovary in its normal position, it seems fair to presume that it was ovarian, and that its uterine connections had been overlooked, owing to the visceral adhesions. Atlee regarded the case as unique.

MEDICAL PROGRESS.

A RARE FORM OF PREGNANCY.—In a recent number of the *Archiv für Gynäkologie* a case is recorded which, on account of its exceeding rarity, deserves notice. It occurred in the clinique of Prof. LITZMANN, of Kiel, and is reported by Dr. WERTH. It was one of pregnancy in the imperfectly developed horn of a bicorned uterus, the fœtus, fully developed, being retained beyond the full term. The patient was thirty-nine years old, and had had two children. She last menstruated in December, 1878. Fœtal movements were felt about the end of May, 1879. In the latter end of October the fœtal movements were unusually vigorous, and then ceased. Then came pain; and at the end of November, feverishness, sanious vaginal discharge, and wasting. She was taken into the hospital, and as, on examination, the os uteri was found large enough to admit the finger, and the fœtal head could be felt within it, the diagnosis was made that it was a case of retention of a dead child in the uterus. On February 14, laparotomy was performed: a decomposing, but fully developed, child was removed, and then the sac, at first supposed to be the uterus, which had contained the fœtus, was extirpated. On examination this sac was found to have only one set of uterine appendages. The patient died on the 16th from peritonitis. It was then found that the uterus was bicorned, the fœtus having developed in the right horn. The right kidney was absent. A corpus luteum was present in the right ovary. The author has only been able to find one case on record which at all resembles this, viz., one published by Turner.[1] We may add that Dr. Barnes (in his work on Diseases of Women) has hazarded the speculation that many cases reported as extra-uterine gestation, in which fœtal bones, etc., were discharged per vaginam, were really cases like this one.—*Med. Times and Gazette*, Dec. 3, 1881.

CONTUSION OF THE TESTICLE.—From an elaborate article on this subject by Profs. MONOD and TERRILLON, the following conclusions are drawn:

1. Contusion of the testicle is frequently followed by transient pains, without any appreciable local lesion, and without subsequent inflammatory reaction.

2. When the contusion is more severe, incontestable material lesions are produced in the parenchyma of the testicle, which may give rise to a more or less severe inflammatory reaction, leading, generally, to atrophy of the organ, or, more rarely, to suppuration.

3. It may then be said that traumatic orchitis is most frequently an atrophic orchitis, with a consequent grave prognosis as to function. Three degrees may be recognized: The first is characterized by simple hæmorrhages into the cellular tissue; the second by hæmorrhages corresponding to rupture of the semeniferous tubules; and the third by rupture of the albuginea, with escape of the tubules into the vaginalis; this form is accompanied by crushing of the testicle.

4. Atrophy is particularly frequent in youth; suppuration in the aged and debilitated.

5. The epididymis may be affected at the same time as the testicle, but it shows less tendency to atrophy.

[1] On Malformation of the Organs of Generation. Edinburgh, 1866.

6. The peripheral lesions, whether located in the vaginalis or in the periepididymal cellular tissue, often mask the original injury, and are frequently a cause of error.

7. The frequency with which orchitis follows contusion has been greatly exaggerated. It is frequently confounded with urethral orchitis; careful examination of the urethra will enable this error to be avoided.

8. Certain forms of orchitis, depending upon diathesis, are often wrongly attributed to a traumatism; the injury can, however, in such cases, prove the determining cause, as, for example, a contusion can render evident a tubercular or syphilitic affection of the testicle in persons affected with these diatheses, or can hasten the development of tubercle which had been previously latent.—*Arch. Gén. de Méd.*, Dec., 1881.

TREATMENT OF TONSILLITIS AND HYPERTROPHY OF THE TONSILS BY BICARBONATE OF SODA.—Dr. ARMANGUÉ reports in *Revue de Thérapeutique* seven cases of tonsillitis cured in less than twenty-four hours by the bicarbonate of soda. This method of treatment was introduced by Dr. Giné, Professor of Clinical Surgery, who employed bicarbonate of soda locally either by insufflation, or directly applied by the finger of the patient. The applications should be frequently repeated until the disease disappears. Dr. Giné relates dozens of cases in which a cure was accomplished in less than twenty-four hours, and has never seen this method fail to produce a good effect. The alleviation is almost always immediate, and is never long delayed. Its efficacy is especially marked in the prodromic period of tonsillitis, when it will invariably abort the disease. According to Dr. Giné, bicarbonate of soda does not diminish the predisposition to anginas, but only arrests their development. Excision of the tonsils is a useless operation in cases of hypertrophy of the tonsils, since the hypertrophy can be rapidly removed by frequent applications of the salt of soda.—*L' Union Méd. du Canada*, Dec., 1881.

HYSTERIA IN CHILDHOOD.—SCHMITT (*Ann. Univ. di Med. et Chir.*) confirms the existence of hysteria in children, as is admitted by numerous authors, and reports several cases seen in the clinic at Strasbourg:

1. A case of hysterical aphonia in a little girl aged seven years, and cured by the simple introduction of the laryngoscope.

2. A case of a little girl thirteen years of age, who had not yet menstruated, and who had for nine months been unable to swallow; she was cured by a single catheterization.

3. A case of an anæmic and badly-nourished little girl aged nine years, with convulsive and maniacal hysteria, which resisted all treatment.

4. A case of a little girl nine yeas old, who had a hysterical contracture, and was cured by moral treatment.

As causes of this rare disease, the author indicates anæmia, chlorosis, and inherited nervous temperament. The general condition of the patient must be improved before any treatment is attempted.—*L' Union Méd.*, Nov. 27, 1881.

MULTILOCULAR CYST OF THE KIDNEY—EXTIRPATION—DEATH.—In the *San Francisco Western Lancet*, November, 1881, there is a report of a case in which Dr. O. O. BURGESS found, on examination, a large indistinctly fluctuating tumor just below the margin of the liver. There were no symptoms of renal or hepatic trouble, nor had any been present previously. As the tumor gradually increased in size, and the patient became exhausted by the increasing pain, the cyst was aspirated, and about a pint of liquid removed. The next day the tumor was as large as ever, and was again tapped, with the same result. There being considerable difference of opinion as to the diagnosis, and the patient rapidly failing, it was determined to make an exploratory incision. This revealed the true nature of the growth, which was removed with some little difficulty. Death resulted from shock thirty hours after the operation.

From a letter from Dr. Burgess to the Editor of the MEDICAL NEWS, we definitely learn that "no apparent trace of the right kidney, in which the multilocular cyst had been developed, could be detected, either during the operation or after death. The organ, as such, was lost in the development of the cystic disease. The fact that several small renal concretions were found in the cysts was accidentally omitted from the published report. This fact seems to me of some importance in its possible relation to the causation of the disease."

FIDDLE-STRING AS A BOUGIE.—Dr. F. E. DANIEL, of Jackson, Miss., failing in a case of very tight stricture to get in the smallest ordinary bougie, used in the emergency a small *fiddle-string*. This passed in readily. Being withdrawn in a few minutes, it was found to have swollen to nearly twice its previous size. A larger one was then passed and allowed to remain fifteen minutes; this being then withdrawn, the urethra was sufficiently dilated to get in a No. 4, then a No. 6 bougie, and finally a flexible Nélaton's catheter, threaded on a fiddle-string. A second case was equally satisfactory. Dr. D. claims for the fiddle-string (catgut) cheapness, simplicity, availability, harmlessness, strength, and rapid expansion.—*Maryland Medical Journal*, Dec. 1, 1881.

SECONDARY ANEURISM OF THE RADIAL ARTERY.—In the St. Louis *Courier of Medicine* for Dec., 1881, Dr. T. J. TURPIN reports the case of a negro, aged forty-five, who had applied, in March, 1873, for treatment of an aneurism of the radial artery. The aneurism was situated about one inch above the wrist-joint, and was about the size of a partridge egg. All the diagnostic points of aneurism were unmistakably present. The patient was a carpenter by trade, and a man of very intemperate habits. Nothing was done at the time beyond directing the man to give up his work for the time being and endeavor to reform his intemperate habits. It so happened that the patient was not seen again for several months, and then the aneurism had undergone a spontaneous cure, which was complete, no traces of the aneurismal sac remaining. Early in the spring of the present year (1881) the aneurism recurred at the identical spot on the same artery, attaining a larger size than the previous one. Digital compression, not complete, but so as to mitigate the volume and force of the blood, was employed, when the aneurism rapidly disappeared, and in a few weeks no trace of it remained. The patient works steadily at his trade, and has discontinued his drunken habits for over three years.

The points of interest in this case are:

1. The extreme rarity of the morbid condition, being the third "unequivocal" case upon record.

2. The length of time which elapsed before the recurrence of the disease, viz.: eight years.

3. The facility with which a cure was effected, notwithstanding the long-continued use of alcoholic stimulants militated against the probability of such a result.

BILIARY FISTULÆ.—A curious example of multiple biliary fistulæ has been communicated by KOSACH to the Medical Society of Cologne. The cystic duct was completely obliterated. The gall-bladder, in conse-

quence apparently of the irritation of biliary calculi, had contracted adhesions to the duodenum, with which it communicated by a large fistulous opening. Near this was another opening by which the gall-bladder communicated with the colon. A third fistula existed between the duodenum and the colon. The common bile-duct was distended, and its cavity obliterated, by two biliary concretions. These lesions were not suspected during life. The woman presented no jaundice, in spite of the closure of the ducts, on account of the free passage for the bile into the intestine. She had never suffered from hepatic colic. The chief symptom was constant diarrhœa, which caused fatal exhaustion, in spite of a "canine appetite," which she strove unceasingly to satisfy.—*Lancet*, Dec. 3, 1881.

THE BLOOD IN CHLOROSIS AND PREGNANCY.—From the examination of the blood in twenty-two cases of pregnancy and in seven of chlorosis, made with Hayem's chronometer, Dr. FREDERICK WILLCOCKS draws the following conclusions:

1. That a more or less considerable diminution of hæmoglobin is found in both pregnancy and chlorosis, especially in the latter, but that beyond this fact no obvious analogy exists between them.

2. That in pregnancy the diminution of color is due to a fall in the number of red cells, and that the individual cell remains of high value. In chlorosis both the cells and the individual value are reduced, the latter being in excess of the former.

3. That the blood-state of healthy pregnancy is due to a large relative increase in the water of the plasma, and that this condition does not constitute a true anæmia, but is due to the progressive enlargement of the vascular area during pregnancy.—*Lancet*, Dec. 3, 1881.

TETANUS AFTER OVARIOTOMY.—In the *Lancet* for Dec. 3, Dr. JAS. M. BENNETT reports a case of ovariotomy, in which the operation was followed on the sixteenth day by tetanus. Atropia, quinia, physostigma, chloroform, morphia, and nicotine were used; the patient died on the eighteenth day after the operation.

GASTROSTOMY.—Recently at University College Hospital, London, Mr. MARSHALL performed the operation of gastrostomy upon a man aged sixty-five, who was the subject of malignant disease of the œsophagus, employing a method for which we are indebted to the experimental physiologists. It would be more correct to say that the first step of the operation has been accomplished, but that was by far the most serious step. The stomach was stitched to the abdominal walls by sutures which passed through the peritoneal and muscular coats of the stomach, and through the parietal peritoneum, but did not penetrate the gastric cavity. In four or five days after the date of operation, the final step, which consists in opening the stomach, will be taken; by postponing this, it is possible to maintain the wound in an aseptic condition until after the peritoneal adhesions have become firmly organized.—*British Med. Journ.*, Dec. 3, 1881.

IODOFORM POISONING.—Dr. A. HENRY, who had previously obtained very good results in carious disease by treatment with iodoform dressing, communicates to the *Deutsche Med. Woch.*, No. 34, 1881, the details of two fatal cases of poisoning from the use of iodoform in this way. No other positive cause of death could be discovered on *post-mortem* examination, and in both instances the symptoms presented were typical. The cerebral symptoms were the most prominent, consisting in extreme drowsiness, from which it was difficult to awake the patient, and which eventually ended in coma; there were also paralysis of the sphincters, aphonia, contractions of the muscles of the neck, boat-shaped retraction of the abdominal walls, and a very rapid pulse. Temperature was normal throughout. The only difference between the cases was in the acuteness with which the symptoms set in. In the first case $\frac{1}{\frac{1}{8}\frac{1}{8}}$ grm. iodoform had been used, the first signs of illness appearing on the second day, and death occurring on the sixth. In the second case $\frac{1}{\frac{1}{8}\frac{1}{8}}$ grm. iodoform were used, nine days passed, in which the patient was perfectly well; this period was followed by two days of distressing headache; then drowsiness, etc., were noticed, and the patient died on the sixteenth day after operation. *Post-mortem* examination revealed only fatty degeneration of the heart, and parenchymatous disease of the liver and kidneys, as in cases of chloroform poisoning, and in the experiments made on animals by Moleschott, Binz, etc. It remains to be mentioned only that the first patient was a drinker, well-built, and aged fifty-seven; the second was a weakly woman, aged sixty-three.—*Glasgow Med. Journ.*, Dec., 1881.

CONTAGION OF TUBERCULOSIS.—M. TOUSSAINT presented a note on this subject at the meeting of the Académie des Sciences de Paris, held on November 7, 1881. He finds that true tuberculosis, whether in the case of man, the cow, pig, or rabbit, reproduces itself indefinitely with absolutely constant and identical properties, and that it is capable of being transferred from animal to animal without losing its virulence; in fact, it becomes more virulent when often inoculated. At the start it requires four or five months to kill a pig or rabbit with tuberculosis, but with the fifth series, two months are sufficient. If thirty-five days after the inoculation one of the set of animals be killed, and from it a new animal inoculated, the latter will often die with the rest of the series.

It is especially with tuberculosis produced by culture that the greatest increase in virulence is seen. The serous fluid in a caseous gland of a cat dying from a cultivated injection, was inoculated into six rabbits; all became tubercular. Forty days afterwards one was killed; it showed already pulmonary tubercles, with which six rabbits and a pig were inoculated, the latter died in fifty-seven days, and the rabbits in sixty-eight. He has remarked that the fifth series of cultures are always more abundant and rapid than the first, and the tenth more than the fifth.—*Revue Scientifique*, Nov. 19, 1881.

DEVELOPMENT OF A SINGLE BREAST IN GIRLS.—M. DESPRÈS took occasion of the presence of a girl at his clinic to draw the attention of his class to a circumstance that causes alarm to mothers, and is sometimes judged wrongly of even by practitioners. This was an example of the development of only one breast at the age of puberty, when the belief is often entertained that this arises from the presence of a tumor. This girl was thirteen years of age, and was brought to the hospital under the idea that she had a tumor of the right breast, the left one not yet having undergone any change. Her attendant had prescribed iodide of potassium. M. Desprès at once assured the mother that it was only the natural development of the organ, and would be soon followed by the appearance of the menses and the development of the other breast. He observed to his class that while it is natural for mothers to be deceived in these cases, it should be impossible for the surgeon to be so. In fact, there exists beneath the breast a regular prominence in the form of a movable disk on the chest, without the slightest adherence to the skin, and accompanied by no pain whatever. The nipple is exactly in the centre of the tumefaction, and although the developing gland is resistant, it is never irregular, and never presents lumps. A tumor

of new formation, such as a sarcoma, is always harder, and is never found exactly in the centre of the mammary region.—*Med. Times and Gazette*, Dec. 10, 1881, from *Gaz. des Hop.*, Nov. 24, 1881.

POLYSARCIA.—A remarkable case of polysarcia was exhibited at the last meeting of the Paris Academy of Medicine by M. HILLAIRET. The subject is a female child, a little over five years of age, 1 metre 15 centimetres in height, and weighing about 136 lb. The following measurements were taken on November 27: Round the waist at the level of the umbilicus, 107 centimetres; round the chest, 102 centimetres. Circumference of the neck, 37 centimetres; of the arm at the axilla, 35 centimetres; of the elbow, 26 centimetres; of the wrist, 17 centimetres. The upper part of the thigh, the knee, and the instep measured respectively 57, 38, and 25 centimetres. The parents of the child are of average size, and their other three children are not unusually developed. Notwithstanding her enormous bulk she is able to run, and even to jump.—*Lancet*, Dec. 10, 1881.

HERPES OF THE LARYNX.—In view of the rarity of this affection, and, indeed, the doubt expressed by many authors as to its actual existence, the case reported by Dr. GOTTFRIED SCHEFF in the *Allgemeine Wiener Medizinische Zeitung*, November 22, 1881, is of interest. The patient was a man sixty years old; the affection was introduced with fever and isolated areas of redness and swelling of the mucous membrane of the larynx, with burning and stabbing pain, difficulty in swallowing, dry cough, and even, when the swelling was marked, with difficulty in breathing. After three or four days a vesicular eruption appeared entirely similar to the ordinary herpes labialis, and followed an analogous course, with the exception that no crusts were formed after the rupture of the vesicles, the excavation becoming rapidly skinned over. During the stage of inflammation Dr. Scheff used applications of ice, and later merely an expective treatment.

PENETRATING WOUND OF THE AORTA.—At the meeting of the Vienna Gesellschaft der Aerzte, on November 25, Dr. ZILLNER exhibited a specimen of a penetrating wound of the aorta, the man living for sixteen days after, and then dying from pericarditis. The course of the wound ran from underneath the right clavicle, through the pectoralis major and the second intercostal space into the aorta, in which an aperture four millimetres in length, and situated three fingers' breadth above the valves, was visible. The small size of the wound, a considerable atheromatous degeneration of the aorta, the slight retraction of its inner coat, and a possible plugging by the pericardial covering, may perhaps account for the prolongation of life in this case. Prof. Chiari observed that even a spontaneous rupture of the aorta may heal. In 1880, in the Rudolph's Hospital, while dissecting the body of a man who had died of phthisis, he met with a false aneurism of the ascending aorta, with a transverse rupture of the vessel by the side of it, which had healed. —*Wien. Med. Zeitung*, Nov. 29, 1881.

TREATMENT OF BRONCHIAL AFFECTIONS OF PULMONARY PHTHISIS BY AMMONIACAL INHALATIONS.—M. MELSENS highly recommends (*Bull. de l'Académie Belge, et Paris Méd.*, Oct. 22, 1881) the therapeutic employment of ammonia by inhalation in phthisis. Knowing that ammoniacal emanations may be respired without danger, of which the proof is the perfect health of workmen who dig guano, and also knowing the good effects of the air of cow-houses in pulmonary phthisis, effects which are generally with justice attributed to the emanations of carbonate of ammonia generated in these stables, M. Melsens conceived the idea that continuous but moderate respiration of this salt might be useful in other affections of the respiratory organs. He decided, after an attack of acute bronchitis, to make the experiment on himself. For that purpose, he wore outside his shirt a bag containing some pieces of carbonate of ammonia; after some time he was absolutely relieved from the affection; improvement set in from the first day. Several invalids who employed the same means obtained great benefit from it, even in cases of long-continued chronic bronchitis. Amongst others, a physician at Brussels, who had suffered for a long time from an obstinate cough, due to chronic bronchitis, with dilatation of the bronchi, complicated with emphysema, asthma, and sometimes with acute laryngitis. He used the bag of carbonate of ammonia, and found himself perfectly cured.—*London Med. Record*, Dec. 15, 1881.

TRANSFUSION OF BLOOD FOR HÆMORRHAGE IN TYPHOID FEVER.—At the meeting of the Clinical Society of London held on November 25, Dr. MAHOMED read notes of two cases of direct transfusion of blood for hæmorrhage in typhoid fever, in both of which, although ending fatally, there seemed to be marked temporary improvement.

THE TREATMENT OF CHOLERA.—In an article on the cholera epidemics of 1875, '76, and '77, at Damas and French India, Dr. DESPRÈS found the following formula very successful: Chloroform, 1 gramme, or 15½ grains. Alcohol, 8 grammes, or ʒij. Acetate of Ammonia, 10 grammes, or ʒiij. Syrp. of Muriate of Morphia, 40 grammes, or ʒx. Water, 110 grammes, or ʒxxviii. Mix, and take a teaspoonful every half-hour. Under the use of this prescription the mortality, which had been 80 per 100 of cases, was reduced to 28 per 100.

RAPID LITHOTRITY IN CHILDREN.—In the *Allgemeine Wiener Medizinische Zeitung* for November 29, 1881, there are reports of two cases in which litholapaxy was attempted in children, and terminated unsuccessfully. In one case, that of a boy aged six years, operated on by Prof. BILLROTH, several large fragments were left in the bladder, and false passages were made with urinary infiltration, and death as a result. The other case alluded to was operated on by Prof. Dittel, in which litholapaxy was unsuccessful, and had to be followed by lithotomy. It seems due to Prof. Bigelow to say that he has never recommended his operation as applicable to children.

PARSLEY AS AN ANTILACTIC.—Dr. STANISLAS MARTIN, after observing that the use of mineral waters interrupted the secretion of milk, states that, as an external application, parsley leaves act most efficaciously in dispersing it, and that they were used for this purpose by the Roman matrons of old. The breasts should be covered with freshly plucked leaves, and these should be renewed several times a day as fast as they begin to fade. The dispersion of the milk soon takes place.—*Med. Times and Gazette*, Dec. 10, 1881.

DUBOISIA IN THE NIGHT-SWEATING OF PHTHISIS.—Dr. FRANZEL has used pills of $\frac{1}{120}$–$\frac{1}{80}$ of a grain of duboisia in thirteen cases of phthisis and two cases of joint affection with profuse sweating, and found that it produces far less effect than atropia; it must be given for days in succession before any effect is evident, and in some instances fails completely. It also produces unpleasant effects, such as nausea, dizziness, dryness of the throat, etc. Once delirium was produced.—*Centrlb. f. d. med. Wissen.*, Dec. 10, 1881.

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SATURDAY, JANUARY 21, 1882.

THE SMALL-POX.

IN another column we print an article on the present epidemic of small-pox in the United States. The statistics given in it are sufficiently striking, although they by no means represent the full extent of the spread of the disease. This is especially the case as regards the States of Illinois and Wisconsin, where it has been slowly but steadily gathering headway during the past year, in a population having a relatively large proportion derived from the North of Europe, and to a great extent unprotected by vaccination. Vigorous efforts are now being made by the health authorities of these States to stamp out the disease, and the orders recently issued by the State Board of Health of Illinois, if systematically enforced, ought to produce a marked change in the small-pox reports from this State within the next month.

These orders do not enforce compulsory vaccination, although the Board has the legal right to do so, but they urge it in the strongest terms and suggest that local boards may properly treat persons refusing to be vaccinated as suspects, especially if they have been in any way exposed to the contagion of the disease.

The circular of the Illinois Board concludes as follows: "*No disease can be so surely prevented or controlled as small-pox. Its existence in a community argues carelessness or ignorance.* The latter may be pardoned in immigrant laborers and peasants; *either is inexcusable in any American citizen.*" Making some allowance for the rhetoric of this statement, it fairly expresses the views of physicians and sanitarians of the present day, and it may therefore be taken for granted that the present epidemic proves that there are in this country a large number of persons unprotected by vaccination. These may be divided into two classes. The first includes those who have never been vaccinated, and is mainly composed of adult foreigners and negroes and of young children of all classes for whom the operation has been omitted through carelessness and forgetfulness. There are a few cases in which the omission has been deliberate through fear of evil results from the operation itself, but the number of these is so small that it is unnecessary to take it into account in relation to the epidemic.

The second class includes those who are supposed to be vaccinated, but who are really unprotected, either because the true vaccinia was never developed in them, or because it was developed insuffi iently or imperfectly, or in some few cases, as in some cases of persons who have suffered from small-pox itself, there seems to be a sort of perpetual susceptibility to the disease.

We shall notice here but a single cause of this insufficient vaccination, and that is the difficulty of getting fresh, pure, and thoroughly reliable virus. This difficulty is, it is true, very small; it really involves only the obtaining a post-office order and writing a letter; but, small as it is, it is no doubt often sufficient to turn the scale by causing the matter to be put off for a more convenient hour until it is totally forgotten. One remedy for this, and probably the most effectual one which can be devised, is that the virus shall be furnished gratuitously to physicians by the State under the guarantee of the inspection of a skilled inspector as to its purity and power.

This is done by the State of Maryland, but the guarantee is probably not of much value, for the State has under its control no establishment for the production of bovine virus. Whether a National vaccine farm should be established under the direction of the National Board of Health, for the purpose of supplying reliable bovine virus to all physicians needing it, is a question which is now being discussed to some extent.

It is probable that this is the only way in which a gratuitous supply of such virus can be provided, since it is almost certain that few, if any, of the individual States will undertake such a task; and while there are some objections to it, we think that, upon the whole, Congress would act wisely in authorizing and directing the Board to try the experiment.

So far as regards quarantine regulations, it seems to us that every emigrant to this country should either show satisfactory evidence of good vaccination, or be vaccinated.

It will, of course, be useless to attempt to enforce this regulation at all points on either the Canadian or Mexican frontiers, for a permanent land quaran-

tine along such extended lines is practically impossible, but far the larger number of emigrants enter at our great sea-ports, where such a vaccination regulation can be carried out with comparative ease.

With regard to methods of dealing with the disease when it has appeared in a community, we may have something to say hereafter.

AMERICAN MEDICAL LITERATURE.

IN the NEWS of the 7th inst., we quoted from the London *Medical Times and Gazette*, the assertion that "American medical literature is very voluminous, and characterized by great originality, inventive genius, industry, and practicality." It would be difficult to convey higher praise in the same number of words, and so eulogistic an opinion from an English critic whose position gives him ample opportunity of forming a correct judgment, ought to be sufficient to encourage those among us who are laboring in the cause of medical science, and to silence the croakers who are blindly seeking for some external cause to explain the deficiency which they assume to exist. While they are thus wasting their energies, and waiting for the good time when fame and wealth shall be had without labor, the real live men in the profession have been earnestly at work, and have already built up a literature which commands respect throughout the scientific world.

No observer who has reached middle life can have failed to note the change which has taken place in this regard within the narrow compass of a single generation. The time is not so long past when the few eminent writers of whom we could boast—Dewees, Wood, Dunglison, Meigs, Hodge, Drake, Bigelow, Mott, and their compeers—were little known beyond our own shores; when students had few text-books of home production, and the medical issues from American presses were largely composed of reprints. Now, however, our men of mark are known, and quoted with respect wherever the language is read; there is scarcely a subject on which the student cannot find at least one excellent American work eminently adapted for practical use; and the proportion of reprints among the publications of the day is yearly growing less. American medical science is asserting its right to be heard, and the assertion is listened to with constantly increasing respect. The future, indeed, is bright. As the English language is becoming the dominant one among civilized men, and as America is becoming the leading nation of the earth, it is a world-wide audience to whom our writers will speak through the press. Already in far-off Australia, New Zealand, and Japan, they have their attentive disciples, and these will multiply, together with the teeming millions at home and in the fatherland, into a multitude which will stimulate to yet higher exertions the best minds among us.

In the natural exultation which such a prospect is well-fitted to call forth, we should not forget the debt which we owe to our English brethren. If we are relying upon their labors less now than we did a generation ago, the aid which they afforded us, when we were not as self-sufficing as we now are, was substantial indeed. Their works, unsurpassed in practical value by those of any other race, were reprinted in this country, and the humblest student was thereby enabled to avail himself of their teachings; and to this free communication of their ripest professional experience we doubtless owe the training of many minds which have since become teachers in their turn; to it we certainly owe the stimulation of the reading habit which gives to our own writers their circle of readers. Even the editing of these books, and adapting them to the wants of the American reader, which has so long formed a favorite theme for the criticism of the unthinking, has been an essential service, rendered in many cases by leading men in the profession, who have thus, in addition to the benefits conferred on the student, aided in fitting themselves for subsequent independent work.

All this has been accomplished in the absence of an international copyright law, which many have assumed to be an essential condition precedent to the growth of a flourishing home literature. Yet notwithstanding this, the development has been healthy and rapid—quite as rapid, indeed, as that of any other country. The influence of international copyright, however, is a subject requiring more space than we can devote to it at present, and we hope to recur to it at an early day.

There is one peculiarity in the existing condition of our medical literature, to which we may properly call attention. This is the fact that most of our writers of books are residents of Philadelphia or New York. This is, of course, partly attributable to the fact of the superior clinical and educational facilities of the larger centres of population, where the material for research and observation is at hand, and the stimulus to work is greater, from the activity of medical teaching, and the attrition of mind with mind. Partly, also, it is to be explained by the attraction which these great cities exert upon those who distinguish themselves elsewhere. Gross was a resident of Louisville, Flint and Hamilton, of Buffalo, and Bartholow, of Cincinnati, when they laid the foundation of their fame as writers by works which proved their power as thinkers and teachers. Yet, after due allowance made for these causes, we cannot but think that the eminent men who are to be found scattered among the profession everywhere throughout our country, have not been diligent enough in discharge of the duty, which they owe to themselves and to

their generation, not to allow the results of their studies and of their experience to die with them. Much of this may doubtless be accomplished by journalistic contributions—much already is done in that direction—but much more can be done, and one of the leading aims of the NEWS will be to stimulate the production of this material, and to give it the widest circulation among the readers of that English race which now encircles the globe.

ABDOMINAL SURGERY.

MR. LAWSON TAIT, in a recent issue of the *Medical Times and Gazette*, gives a very interesting summary of his last year's experience in Abdominal Section. From November 1, 1880, to November 1, 1881, he opened the abdomen either for definitely-determined and successfully-accomplished operation, or for exploration, 110 times, of which 51 were cases of ovariotomy. Of the whole number, 9 (8.2 per cent.) died; and of the ovariotomies, 2 (3.49 per cent.). He repudiates entirely the antiseptic system. But the thing that strikes one most forcibly is the utterly different position held by the peritoneum to-day as contrasted with its autocracy of twenty or thirty years ago. Then it was *noli me tangere;* now the danger is, that opening the peritoneal cavity may become almost a morning's amusement to rash and inexperienced men. Then ovariotomists, certain of their diagnosis, and of the possibility of the removal of such tumors, were denounced in unmeasured terms and with the most offensive epithets; now exploratory operations, undertaken deliberately to find out what is wrong in doubtful cases, "serve the purpose of complete tappings, and as the patients uniformly recover, they do no harm at all." The lesson the gynecologists have taught, the surgeons should not pass by, as, in fact, Billroth and Sims, Péan, Czerny, Simon, and others, by their brilliant operations on the stomach, the gall bladder, the spleen, and the kidney, have shown us. The female peritoneum resents injuries perhaps no more quickly than the male, nor in cases of ovarian tumors more than in ileus or abdominal wounds. An exploratory operation, with our present surgical knowledge and methods, is not only no more dangerous than an intussusception, or a bullet in the belly, or a stab that may have produced unsuspected hæmorrhage or other unknown damage, but is, in fact, far less dangerous. Lawyers not infrequently assert that no class of men are more timid under public responsibility than doctors, and especially surgeons in medico-legal cases. If true (and to some extent it is), it is not to be wondered at in view of the constant attempts of our "brothers-in-law" to lay the death of the patient in such cases as Fiske's and Landis's and many others to the doctor rather than the assailant. But now that the way has been clearly pointed out, and its dangers shown to be far less than we had supposed, we should not be slow to seize upon our advantages. The next ten years should show as great an advance in our general surgical treatment of abdominal lesions by abdominal section as has the last ten in gynecological practice. Mr. T. Smith some time since asked whether the peritoneum might not be treated after strangulated hernia, followed by peritonitis, as after ovariotomy, by opening the abdominal cavity, and washing it out; but the profession has not yet answered his question. But when we remember that Battey's operation, the extirpation of the kidney (of which Dr. Thomas gave a notable case in our issue of January 7), splenotomy, the extirpation of the entire uterus, cholecystomy, and exsection of a part of the stomach, are but of yesterday, it is hard to predict what feat to-morrow may not see successfully accomplished.

VETERINARY MEDICINE.

A NEW avenue is likely to be opened in this country for the labors of those energetic and praiseworthy philanthropists, the members of the Society for the Prevention of Cruelty to Animals. An ordinance has just been introduced into Select and Common Councils of Philadelphia looking to the purchase by the University of Pennsylvania of a lot of ground adjoining the present college buildings, and intended chiefly for the establishment of a veterinary school and hospital, in which the diseases of our domestic animals can be studied, taught, and treated.

The condition of veterinary medicine in the United States is by no means creditable to our humanity, enterprise, or business foresight. Capital, usually so sensitive in such respects, is here phenomenally indifferent to the safety of large investments. The aggregate value of the live-stock of the country, including poultry, is not less than $2,000,000,000, and is probably more. Serious epidemics, or, rather, epizootics, have from time to time broken out, and have raged uncomprehended and unchecked, destroying immense numbers of valuable animals. The pleuro-pneumonia of New England cattle in 1859; the Texas fever of 1868; the influenza, which in 1872 affected a large majority of the horses of the Eastern States; the foot-and-mouth disease, which, after establishing itself here, fortunately died out, but proved so serious in England; the various appearances of murrain, hog-cholera, chicken-cholera, and other similar ailments, some of which carried off a majority of the animals attacked—all these are instances of the insecurity in this country of property held in horses, cattle, sheep, swine, or poultry.

With the incompetency of the average veterinary surgeon to deal not only with these but with minor and every-day disorders, we are most of us familiar, and, indeed, in the majority of cases, treatment is relegated to the groom or blacksmith, the shepherd, drover, or cowleech.

But as an example of the beneficial results following *scientific* work in this relation, it may be mentioned that M. Pasteur, of Paris, has recently discovered that, by a process of inoculation closely resembling vaccination, poultry can be protected from chicken-cholera, and cattle and sheep from *anthrax*. Within the last few weeks it is said that 30,000 animals have been inoculated at his laboratory, and it is proposed to extend this protective influence to all the cattle in France.

So far as we know, there is but one organized school of veterinary medicine in America, and of late years but little has been heard from that, probably on account of the lack of public support and patronage, of which we have reason to believe it was thoroughly deserving. Charters have several times been granted by State Legislatures, twice in Pennsylvania, once in Massachusetts, and once in New York, but with the single exception mentioned without subsequent results.

Abroad veterinary medicine has existed as a distinct science for one hundred and twenty years. Schools have been established at Lyons, Paris, London, Glasgow, and Edinburgh, and many of them are in a flourishing condition. Students are compelled to pass a preliminary examination, and a course of three years is compulsory before a license to practice can be granted. In the large cities, successful practitioners of this branch of medicine frequently earn professional incomes of from $5000 to $8000 per annum.

In England and in Scotland, the veterinary surgeons have formed corporate bodies under royal charters, which empower them to appoint examining boards, and to confer diplomas or certificates, which, we are told, are "fully recognized as a guarantee of professional ability by the public throughout Her Majesty's dominions, as well as by the authorities at the Horse Guards and at the India Office."

Any movement in this direction in this country should appeal, it seems to us, to a wide range of sympathies, and should at once enlist in its behalf several large classes of public-spirited citizens; the humanitarians, because to limit and prevent animal suffering is even better than to relieve it, and because the cases of disease immeasurably outnumber those of cruelty or neglect; the capitalists, because by wide-spread diffusion of knowledge on this subject, large amounts of property will be thereby rendered more secure from loss or fluctuation; the political economists and legislators, because a new field of work and profitable employment will be opened up to hundreds of our young men, and because a serious annual loss of national wealth will, in all probability, be greatly lessened or altogether prevented.

PUBLIC ABATTOIRS.

THE establishment, under sanitary surveillance, of abattoirs or public slaughter-houses, in Boston, New York, Philadelphia, Baltimore, and Chicago, is an evidence of proper appreciation of the principles which should govern local sanitary administration. Still other cities are considering the propriety of introducing this much-needed reform, among them Charleston, S. C. A committee appointed to make an investigation of the subject, has examined into the details of these establishments in several of the places above mentioned, and, from personal observation and inquiry, has unanimously concluded to report in favor of the project. This result might have been anticipated, since an unprejudiced investigation must show that the concentration of the entire business of slaughtering and of the utilization and disposal of refuse in well-apppointed and well-regulated buildings, under strict sanitary inspection, is far preferable to the old plan, which permitted the work to be conducted without regulation, except so far as it suited the convenience or caprice of the individual proprietor, and not unfrequently to the annoyance of a whole neighborhood. In addition to the avoidance of nuisances so generally resulting from tardy and careless utilization of the refuse from slaughtering, there is the great advantage which the abattoir system affords of systematic inspection of meat, whereby an additional protection is extended to the public. Charleston is to be congratulated on this progressive movement, and other cities beset with the same annoyances would do well to follow her example.

THE FEES OF THE MEDICAL ADVISERS OF THE LATE PRESIDENT.

A NEWSPAPER report, which has obtained considerable prominence, is to the effect that the Congressional Committee appointed to audit the expenses of President Garfield's illness will insist that the attending and consulting physicians shall present itemized bills duly sworn to with affidavits that the charges are reasonable and usual.

Putting aside altogether, as beneath notice, the implied doubt as to the integrity of those gentlemen, it is manifestly improper that services of such an extraordinary character should be estimated at the usual rates for professional attendance. When distinguished surgeons in active and extremely lucrative practice relinquish their personal occupations, throw aside all other engagements, and

devote themselves almost exclusively to the consideration of a particular case, it is evident that ordinary rules as to "visits" and "consultations" must be set aside in the endeavor to form a just estimate of the value of their labors.

If their services had been voluntary, or in any way pressed upon the patient or the nation, there might be just cause for a display of economy in their remuneration, but under existing circumstances, their constant attendance having been insisted upon by Mrs. Garfield and by members of the Cabinet, we fail to see how Congress, through its committee can, with justice, take any but the broadest and most liberal action in the matter.

It is just, too, that those gentlemen already in the government service, should receive some substantial recognition of their faithful, devoted, and certainly altogether extra-official efforts in behalf of the distinguished sufferer.

In view of the facts we have mentioned, and, in addition, of the hurried and peremptory summons which were repeatedly sent, the frequent and exhausting journeys, not altogether devoid of danger, the stupendous mental strain and anxiety involved in the management of a case of such unprecedented importance, and the almost total cessation of all other occupation, and consequently of ordinary revenues, the Committee would reflect discredit upon itself, and fail to represent the sentiment of the nation, if it offered, as has been suggested, a pecuniary recompense based upon the ordinary professional fees of the average practitioner.

It is safe to say, that the customary fee of a surgeon or physician of eminence called from New York or Philadelphia to Washington, simply to express an opinion upon a case of sufficient gravity to warrant his presence, would not be less than from $800 to $1000, and that he would expect to receive at least $300 daily if he were detained there.

BEEF-TEA AND URINE.

IT is rather a novel idea that in taking a cupful of beef-tea we are really drinking what is equivalent to a cup of urine. According to Mr. Masterman, however, who not long since published a chemical analysis of beef-tea, the two are as alike as may be, only that urine appropriately contains more urea and uric acid. And now comes Dr. Neale, of London, who has been, apparently, in the East Indies, and not only assures us that urine is used as a vehicle for (less agreeable?) medicines, but that, "as a stimulant and general pick-up, I have frequently seen a glass of a child's or a young girl's urine tossed off with great gusto and apparent benefit."

Reduced to straits, we presume we might so use it, but we confess that, usually, "as a stimulant and general pick-up," we mightily prefer the other form of the cup that cheers but does not inebriate.

THE MEDICAL REGISTRATION ACT.

THE law, enforcing the registration of all physicians practising in Pennsylvania, enacted by the last Legislature, was doubtless intended as a first step towards such legislation as may be necessary to secure to our citizens competent medical advisers. As might be expected when such interests are to be provided for and conciliated, the law passed contains some unwise provisions, is obscure in its wording, and admits of various intepretations. That legislation is needed to correct the abuses of medical practice, is conceded by all, but there is no uniformity in the methods of relief proposed.

The present registration law is a transcript nearly of the New York Act, which is now enforced in that State—a fact which ought to silence those who complain that our law was contrived by the medical colleges of Philadelphia. That provision which requires graduates of medical schools in other States to submit their diplomas for verification to one of the medical faculties of this State. is an exact reproduction of the New York law. The medical faculties are required not only to decide as to the genuineness of the diploma, but "to satisfy themselves as to the qualifications" of the applicant, after which "they shall direct their Dean to endorse the diploma." Two interpretations have been given to this provision of the law. The most obvious construction, sanctioned, also, by eminent legal authority, is, that the person presenting himself with the diploma of a school in some other State or country, and demanding its endorsement in conformity with the terms of the law, must "satisfy" the faculty by passing a proper examination. Such an examination, followed by an official endorsement of the diploma, is equivalent to the usual examination for the doctorate, and the subsequent attestation of the candidate's fitness by the signatures of the faculty on his diploma. The holder of a foreign diploma is thus granted another and even more authoritative evidence of professional qualification. It could hardly be expected that the faculties would give so much time and labor, without compensation, and we hold that the schools of New York and of Philadelphia who had proposed to fix a fee of twenty dollars for this service, did not exceed their proper rights. At the same time we are bound to state on undoubted authority that the Philadelphia schools have not received any fees from candidates.

The other interpretation of the Act, which is equally sanctioned by eminent legal opinion, is, that the faculty may be "satisfied" by proof of the identity of the person named in the diploma, and of the

genuineness of that instrument. Without being subjected to a professional examination, the qualifications are assumed on the possession of the diploma, and the Dean certifying these facts to the Prothonotary, the individual is allowed to register. No fee is exacted for this service. We learn that the medical faculties of Philadelphia now base their action on the latter interpretation of the law, and assume that the possession of a genuine diploma from a reputable school is proper proof of professional qualification. We learn, further, that the medical schools of this city are organizing an effort to have this section of the law modified. They regard it as offensive and unjust for the faculty of a medical school in this State to sit in judgment on the qualifications of a medical man, attested by the signatures of a faculty in good standing in another State. Restrictions on diplomas bounded by State lines are manifestly improper. A diploma granted by a reputable medical college should be of equal value in all the States.

PREVENTION OF SMALL-POX.

WE once heard a military officer speak of a great railroad as a great civilizer, and there is no question as to the correctness of the designation. From the centralization of power, possessed in the United States by corporations alone, they are able to accomplish with comparative ease that which municipal, legislative, and even Congressional effort has less power to do thoroughly. This is instanced in the case of the Pennsylvania Railroad, whose action upon the subject of color-blindness we had occasion to record last week. The same company, as we are informed, now requires from each laborer in its employment, and we presume the same rule applies to all grades of employés, a certificate of proper vaccination from some reputable physician. Certainly a most admirable as well as most efficient manner of settling the subject of compulsory vaccination, and one worthy of consideration by all employing large numbers of men and women. Were the same rule established and rigidly adhered to by all employers, much would be accomplished towards stamping out variolous disease.

Such action as that referred to above is not only directly preservative, so far as the laboring classes are concerned, but it must do much in making public opinion. Were such action imitated in factories and workshops throughout the land, it would perhaps make vaccination fashionable, and even the scientific medical mind cannot dispute the controlling power of fashion.

TREATMENT OF BOILS.

DR. LOWENBERG finds incisions and boracic acid solution the most effective treatment of boils. Holding that they are produced by a microphytic parasite, he rejects the usual emollient treatment. He commences by incising them, after the application of ether spray, and then foments with a saturated aqueous or alcoholic solution of boracic acid. When the boils are recent, and the patients refuse the permission to incise them, he finds that simple fomentations with boracic acid solution arrests the development of the inflammatory process.

It may be added that certain internal remedies possess a high degree of value in a succession of boils, notably the pyrophosphate of soda, and the hypophosphites. The relation of a succession of boils to a saccharine condition of the urine should not be overlooked. This is an unknown cause sometimes of their persistence in spite of all the usual remedies.

SPECIAL ARTICLE.

THE PRESENT EPIDEMIC OF SMALL-POX IN THE UNITED STATES.

AFTER having been almost entirely absent from the mortality reports of our large cities for several years, small-pox reappeared at the end of the year 1879 in Philadelphia, New York, and Washington, with an evident tendency to spread. Previous to this it had existed for several months in Texas, and especially in San Antonio. Little or nothing is known as to the mode of its introduction, the outbreaks in Washington and Philadelphia being especially mysterious as to their origin, but it had been prevailing in Canada, Mexico, Austria, Barbary, and Paris, and it probably reached this country from several distinct sources. During the year 1880, the disease became diffused throughout Europe, and especially in European Russia, Austria, Italy, and Germany, although it nowhere assumed the proportions of an epidemic. At the beginning of the year 1881, the principal focus of the disease was in Philadelphia, in which city 196 deaths from small-pox were reported in the month of January. A second centre existed in New York City, a third in Brownsville, Texas, a fourth in Chicago, and a fifth in San Francisco, and from these points and from fresh importations by emigrants, it has gradually spread until, at the end of the year, it existed in almost every State of the Union.

The city which suffered most severely during the year was Philadelphia; the total number of deaths from this disease reported in this city during 1881, being 1319. Six hundred and fourteen of these occurred during the first quarter, the highest number of deaths reported in any one month being 215 in March.

In Chicago, during the year, there were 822 deaths from small-pox, the highest number in any one month being 166 in October, and the next highest, 141, in December. New York City reports 453 deaths from this disease during the year, the highest number in any one month being 84 in June. In

Pittsburg the disease has progressively increased throughout the year, reaching a maximum of 125 deaths in December.

The following table, compiled from the weekly reports contained in the *Bulletins of the National Board of Health*, shows the number of deaths from small-pox reported from the principal cities in this country throughout the year.

Cities and Towns.	Population.	Deaths in 1881.				
		First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Total.
Boston, Mass	362,535		1		7	8
Fall River	49,006	1	1			2
Westfield	7,587			3		3
Holyoke	21,851				15	15
North Adams	10,192	1				1
New Bedford	26,875				1	1
Gloucester	19,329				1	1
New Haven, Conn	62,822		1			1
New Britain	13,978	2				2
Meriden	18,340	3				3
New York, N. Y	1,206,577	97	196	73	87	453
Brooklyn	566,689	7	11	9	7	34
Poughkeepsie	20,207	1				1
Amsterdam	11,711	6				6
Hudson	9,000	4				4
Newburgh	18,050		1			1
Binghampton	17,315		1			1
Buffalo	155,137		1		3	4
Hudson Co, N. J	187,950	23	37	29	113	202
Newark	136,400	2	1		1	4
Orange	13,206	2				2
Plainfield	8,126	1				1
Camden	41,658	14	9	1		24
Philadelphia, Pa	846,980	614	364	162	179	1319
Reading	43,280		1			1
Pittsburg	156,381	8	18	133	285	444
Allegheny	78,000	1	2	9	96	108
Wilmington, Del	42,499	5	63	36	14	118
District of Columbia	180,000		1	1		2
Winchester, Va	5,000				1	1
Richmond	63,803	1	17	14	104	136
Brunswick, Ga	2,891		1			1
Verona, Miss	974		1			1
Vicksburgh	11,814	1				1
New Orleans, La	216,140		2		2	4
Brownsville, Texas	5,672	61	4			65
Austin	10,960				2	2
Louisville, Ky	123,645		6	8		14
Cincinnati, Ohio	255,708	2	4	1	52	59
Cleveland	160,140		1			1
Evansville, Ind	29,280		1			1
Madison	8,945				5	5
South Bend	13,279				3	3
Vincennes	7,837				1	1
Chicago, Ill	503,304	80	105	249	388	822
Lake	18,396	3	3		3	9
Peoria	29,315		1			1
Elgin	8,789				2	2
Milwaukee, Wis	115,578			1	1	2
Kenosha	3,500			2		2
Minneapolis, Minn	46,887		2	1		3
Detroit, Mich	116,342		9			9
Port Huron	9,245			1		1
Albion	1,932				1	1
Bingham Township	969				18	18
Kasson					1	1
Hartford					1	1
Muscatine, Iowa	8,412	2	1			3
Davenport	21,834	1				1
Keokuk	12,117				2	2
St. Louis, Mo	350,522		1	2	9	12
Kansas City	55,813		2		1	3
Omaha, Neb	30,518		1			1
San Francisco, Cal	233,956	12	23	7	5	47
Oakland	35,000		1			1
Boulder, Col	3,069			1		1
Total		951	895	743	1411	4000

Although this table contains only the reports from the principal cities, and gives no information in regard to smaller towns or villages, or rural districts, it is sufficient to show very clearly the wide-spread prevalence of the disease. We have no means of ascertaining the total number of deaths from this cause in the United States during the year, but it is safe to say that it is more than four thousand. It is impossible to obtain any reliable data as to the number of cases represented by this mortality; nor can the number of cases be calculated by the number of deaths reported with any degree of accuracy, inasmuch as the death-rate may be stated to range from 1 to 20 per cent. of those attacked, depending upon previous vaccination and the general character of the epidemic. In Manchester it has been calculated that each death from small-pox represents sixteen seizures of the disease. In Chicago, during the past year, it is estimated that there have been about two thousand (2000) cases, which would give a mortality of over 40 per cent. It is probably safe to say that the total number of cases in the United States during the year is over twenty thousand (20,000).

The principal spreading of the disease has been along the lines of immigration, and the greater number of cases have occurred among foreigners unprotected by vaccination. In Chicago it is stated that, owing to the enforcement of the rule requiring those children who attend the public schools to present certificates, signed by practicing physicians, that they have been vaccinated, there have been but seven school children attacked with small-pox during the past five years (*Northwestern Lancet*, vol. 1, page 55).

In Cincinnati the Health Officer reports that of the first hundred cases, 33⅓ per cent. died, which would show, as in the case of Chicago above referred to, that these cases must have occurred entirely in persons unprotected by vaccination.

The disease was carried to the College of Keokuk, Iowa, by a cadaver, received from Chicago for dissection, and spread to such an extent among the medical students that the college was closed by order of the Board of Health.

Where the disease has been carried into communities methodically protected by vaccination, as is the case in many New England towns, there has been no spread, and the work done in Washington in December, 1879, is an excellent illustration of how the disease may be promptly stamped out where a community is willing to take the trouble to do it.

REVIEWS.

Die Temperatur des Gereizten Säugethiermuskels. Von Dr. Meade Smith, Arbeit aus dem Physiologischen Institut zu Leipzig.—*Arch. f. Anat. u. Phys.* Phys. Abth., 1881. pp. 105–152.

In this article, Dr. Smith reports the results of a very painstaking investigation, performed in the Leipzig Laboratory of Physiology, into the relations which exist between heat-production and contraction of the mammalian muscles. The animals employed were dogs, which were narcotized with chloral, opium, or curare. The muscles selected for study, on account of the accessibility of their nerves and vessels, were the extensors of the lower leg. The contraction of these muscles was made to record itself upon moving paper,

while thermometers, introduced into the aorta, the veins coming from the muscles and between the muscles themselves, gave information in regard to the changes of temperature in these regions. A rise of temperature in the muscles could, of course, be regarded as indicative of an increased heat-production only in those cases in which the temperature of the arterial blood was lower than that of the muscle which it supplied, for the increased vascularity of a tetanized muscle would itself cause a rise of temperature in the muscle, if the blood were warmer than the muscular tissue.

Some of the principal results of the research may be enumerated as follows:

1. The maximum temperature of a contracting muscle is independent of the load under which it contracts. This result is different from that reached by Heidenhain and Fick, in the case of frogs' muscles. The cause of the difference remains unexplained.

2. When a muscle makes an extensive contraction, its temperature rises less above that of the arterial blood than when the contraction is slight, and, in general, the connection between heat-production and contraction, though both result from the same nervous impulse, seems to be much less close in the muscles of warm-blooded than in those of cold-blooded animals.

3. The persistent shortening of a muscle after the stimulation has ceased (known to German writers as "contractur"), resembles tetanus, in the fact that when it is overcome by a heavy load, the muscle returns to its former contracted condition on the removal of the load; but it differs from tetanus in the rapid diminution of temperature by which it is accompanied.

4. Tetanus lasting less than two minutes, causes in muscles deprived of circulating blood as high a temperature as can be produced in muscles in which the circulation is going on.

5. Experiments on curarized muscles give no support to the view that nerve stimulation may cause heat-production without muscular contraction.

In the course of the experiments, it became evident that many of the questions which arose required calorimetrical observations for their solution. An investigation of this sort upon excised muscles supplied by an artificial circulation, seems to Dr. Smith within the possibilities of physiological experimentation.

It is to be hoped that he may be able to continue his studies in this direction, and thus throw additional light upon the problems discussed in his present valuable paper.

A SYSTEM OF SURGERY, THEORETICAL AND PRACTICAL. IN TREATISES BY VARIOUS AUTHORS. Edited by T. HOLMES, M.A. Cantab., *First American from Second English Edition, thoroughly revised, and much enlarged*, by JOHN H. PACKARD, A.M., M.D., assisted by a large corps of the most eminent American Surgeons. In three volumes. Vol. II., 8vo, pp. 1063. Philadelphia: Henry C. Lea's Son & Co., 1881.

The second volume of Holmes's Surgery follows fast upon the first, and gives hope that the work will be speedily completed by the appearance of the last. The present volume treats of the Organs of Special Sense, the Circulatory, Digestive, and Genito-Urinary Organs. The increase in the number of the illustrations we notice again is very large, being about 150 per cent. of additional cuts. The articles are of a character that allows of additions much better than those in the first volume; there is less need of re-casting them. Thus, in Diseases of the Bladder, eight pages are given to Bigelow's operation of Litholapaxy by Dr. Keyes. In Diseases of the Teeth, Dr. Truman has wisely obtained from Dr. Kingsley, a section of six pages on Obturators in Cleft Palate, while Dr. Skene has added over ten pages bodily (chiefly from Thomas and Emmet) on Lacerations of the Perineum and of the Cervix Uteri, and an important and entirely new chapter of forty pages on Injuries and Diseases of the Absorbent System, by Dr. S. C. Busey, has been added. We can add little to the favorable opinion expressed when noticing the first volume. The editors have done their work well, and very few errors or omissions of the original have escaped them. The mechanical execution of the work, except some of the wood-cuts, is excellent, much better than in the first volume.

SOCIETY PROCEEDINGS.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, January 6, 1882.

GEORGE ROSS, M.D., PRESIDENT, IN THE CHAIR.

Pneumonia, Diphtheritic Gastritis.—Dr. OSLER exhibited the specimens, which were taken from a man aged sixty-six, who was admitted to the General Hospital with great shortness of breath and prostration, and died in six hours. He was sent in from the House of Refuge, and the surgeon in charge, Dr. Burland, stated that he had noticed the man two days before walking about looking very blue and short of breath. He sent him to bed, and on examination the next day the signs of pneumonia were evident, and he sent him to the hospital. At the autopsy the stomach and duodenum were enormously distended with gas, the diaphragm on the left side was pushed up in front to a level with the second intercostal space. In the thorax the heart was displaced upwards and to the right, the apex being under the sternum. The right lung was universally adherent, the left was free, but pushed up and compressed by the distended stomach. The right lung was in a state of gray hepatization; the only crepitant parts were a small area at the apex and part of the lower lobe. The left lung was small, compressed, but feebly crepitant. The stomach presented an area of diphtheritic inflammation 12 x 10 cm., just to the left of the cardiac orifice. The mucosa of this region was deeply injected and covered with a closely-adherent grayish-white false membrane, from one to two mm. in thickness. When stripped off, the membrane beneath was deeply congested and rough. In the centre of the patch was a spot from which it had been removed. In the vicinity of the large area were other small bits of false membrane on congested bases. Œsophagus and duodenum normal.

Dr. Bristowe, of St. Thomas's Hospital, was the first to describe diphtheritic inflammation of the alimentary canal in pneumonia; he met with it in the colon in two out of thirty secondary, and in four out of sixteen primary pneumonias. Dr. Osler, in about fifty autopsies in primary pneumonia, had met with five instances of croupous or diphtheritic colitis. This was the first specimen in which the stomach was affected. In connection with this, he called attention to the frequency of the so-called diphtheritic endocarditis in pneumonia; thirty-eight per cent. of the cases which he had analyzed occurred with inflammation of the lungs. The extreme distention of the stomach had probably taken place during life and in connection with the gastritis; it doubtless assisted in bringing about the fatal termination by embarrassing the heart and compressing the healthy lung.

The PRESIDENT remarked on the latency of pneumonia in old men, and on the special liability of these cases to sudden death from heart failure.

Mitral and Tricuspid Stenosis.—Dr. MOLSON related the case—a woman aged thirty-nine, who died in the hospital after a residence of four days. She had had rheumatic fever when nine years of age, and ever since had been troubled with short breath and cough on exertion. The chief symptoms on admission were dyspnœa, extreme rapidity and irregularity of the heart, scanty urine, albuminous, and with granular casts. There was no dropsy. Nothing positive could be determined as to the character of the murmurs under an aggravation of the symptoms; the woman sank on the fourth day. Dr. Osler presented the specimens. The heart showed extreme mitral stenosis, with great thickening of the fused segments; left ventricle small, walls of average thickness; left auricle dilated and hypertrophied. The tricuspid orifice admitted the index-finger, the segments of the valves had united, and the edges were thickened. The right ventricle was dilated and hypertrophied; the right auricle much dilated. The lungs were universally adherent; pleura at left apex very thick, and for an inch or more the lung tissue beneath it was cirrhosed, and had dilated bronchi and fibrous bands passing through it. The lungs were in a state of brown induration, but not congested. The kidneys were slightly reduced in size, granular and rough on the surface, and in a state of tolerably advanced cirrhosis.

Dr. OSLER, in reply to a question by Dr. T. W. Mills, stated that he thought the condition of the kidneys might have been the outcome of the chronic valve disease, and represented a later stage of the large indurated organs commonly met with. There was not extensive arterial disease or hypertrophy of the left ventricle.

The Brains of Criminals.—Dr. OSLER read a paper on this subject, and recorded the results of an examination of the brain of the murderer Hayvern, who was executed at Montreal on the 11th of December. He first referred to the observations of Benedikt, of Vienna, who, in eighty-seven hemispheres from forty-four criminals, has found certain peculiarities which he regards as indicative of a lower type of cerebral organization. The points upon which he most dwells are the confluence of many of the principal fissures, and the existence in a considerable proportion (twenty-seven of the eighty-seven) of four frontal gyri, the fourth being formed by the splitting of the first or second gyrus. This is regarded as an animal similarity.

Hayvern was a low, dissolute fellow, addicted to drink, with no special neurosis in his family, who, on June 29, stabbed a fellow-convict. The brain weighed forty-six and a half ounces, and was fairly well formed; the cerebellum was completely covered by the cerebrum. On examination, it was found to conform in many respects to Benedikt's cases, and was atypical, according to his views, in the following particulars: The union of the Sylvian fissure with the first frontal gyrus; the junction of the interparietal with the parieto-occipital and first temporal fissures; the extension of the calcarine fissure into the scissura hippocampi; the union of the collateral and calcarine sulci, and in the fusion of the first frontal gyrus, so that there appeared to be four frontal convolutions arising from the ascending frontal or anterior central gyrus.

To ascertain how far these peculiarities existed in the brains of hospital patients, Dr. Osler examined forty-three hemispheres from twenty-four individuals, and found that a very considerable proportion were of the confluent fissure type. Thus, the Sylvian fissure joined the fissure of Rolando in eight hemispheres, the frontal sulci in eighteen, the interparietal in nineteen, the first temporal in twelve. The chief difference between Benedikt's series of brains of criminals and those examined, was a greater number of unions between the typical fissures, more particularly the fissure of Rolando, which in the former joined contiguous sulci in twenty-four instances. In nine of the forty-three hemispheres, there were four more or less distinct frontal gyri. He thought that much fuller information was needed about the arrangement of the sulci in the different races, and many more criminals would have to be examined before any positive result was arrived at as to the constant atypical character of the brain in members of this class. Speaking of Benedikt's conclusions, he questioned whether it was wise to speak of criminals as an anthropological variety of their species. On his views there is no place left for responsibility; but society cannot afford to have a class of criminal automata, and every rascal pleading faulty gray matter in extenuation of his crimes.

Dr. HENRY HOWARD (Med. Supt. Longue Pointe Asylum) asked if it were known how many of the brains in the series of hospital cases were from criminals, and whether a larger proportion presented abnormalities than could be reasonably thought to belong to this class. He believed in a criminal class as distinct as a mercantile class, and regarded the mental and moral condition of the individuals belonging to it as dependent absolutely on their physical organization. Hayvern was not responsible for his act; it was not premeditated, but performed under the influence of an uncontrollable impulse; and he thought that there was evidence to show that it may have been connected with the epileptic neurosis.

Dr. HINGSTON wanted to know how it was, if viciousness and crime were the product of defective cerebral organization, that some notoriously wicked men had reformed and lived sober and honorable lives? Was it probable that with such a change there was any alteration in the structure of the brain?

Dr. CAMERON thought that, for Benedikt's conclusions to have any value, it must be shown that criminals have invariably atypical brains, and all other people normal ones. Most criminals have some degree of control over their actions, and the law is an effectual deterrent in many instances, particularly where the penalty enacted touches the person. He illustrated the rapid abolition of garroting by the introduction of the lash, and quoted facts to show the good effects of capital punishment.

Dr. SHEPHERD remarked that it was somewhat difficult to say what was the typical brain. The majority of observations were upon the lower classes; we lacked data as to the arrangement of the fissures and convolutions in a large number of the intellectual members of society. He had frequently seen brains of the confluent fissure type in the dissecting-room.

Dr. MILLS said that, with reference to the series of brains from hospital patients examined by Dr. Osler, the question arises as to how far such patients belong to the criminal class. In about one thousand that he had observed closely, he did not think that many of them ranked in this class.

Dr. OSLER, in reply to Dr. Howard's question, stated that the series of brains which he had examined were nearly all preserved by Giacomini's method, and no data existed from which the social status of the individuals could be ascertained. In the forty-three hemispheres (nineteen perfect brains and five halves), nineteen presented one or more atypical features.

Tiemann's "Urethral Finder."—Dr. HINGSTON showed an instrument, lately made by Tiemann, for facilitating the finding of the urethral canal when a number of false passages existed.

Foreign Bodies in the Windpipe.—Dr. HINGSTON narrated two cases. *False tooth in the trachea for over three months, tracheatomy, removal.* The patient, an elderly lady, who had worn a false incisor tooth for over forty years, and had never been in the habit of removing it at night, noticed one morning that she could

not find it. After searching in vain for some time, her attention was directed to a suspicious cough, and she began to think she might have swallowed it; though she had not been disturbed during the night and had no remembrance of its dropping into the throat. When she consulted the doctor, there was very little inconvenience, no difficulty of breathing; but while in his house a violent paroxysm of coughing came on, and she appeared to be choking. Brunelle's method of inversion was at once practised, and she was relieved. An operation was urged and consented to, but the following day she felt so well that she refused to submit. Dr. Hingston heard nothing more of her for several weeks, when she came again, the cough having become troublesome. She again refused operative measures. After consulting several other medical men, all of whom assured her that the tooth was in the windpipe and must be removed, she returned to Dr. Hingston, and finally decided to have the operation performed. On Nov. 1st, the trachea was opened, and with a pair of slightly curved laryngeal forceps the offending tooth was readily grasped, being situated in the neighborhood of the orifice of the right bronchus. It was a small incisor, with a flat gold plate and two lateral extensions to fasten it to the contiguous teeth. It was coated with dark mucus. In the operation, Dr. Hingston adopted a device which answered admirably. After a long incision through the skin and superficial fascia, he made a transverse incision just below the cricoid, inserted the director upon the trachea and tore down, with the greatest ease and without any bleeding, the tissues covering the first five or six rings. The remarkable feature about the case was the length of time the foreign body existed without producing very serious inconvenience.

Dr. HINGSTON, in response to a question from the President, stated that he thought there was some little difficulty to the entrance of air into the right lung.

The second case was that of a young boy, son of a farmer in New York State, who had had *a pin in the windpipe for eleven months*. A day or so after swallowing it, the child was brought to Dr. Hingston, but, as there were no special symptoms, an operation was not deemed advisable. The child subsequently suffered a great deal from cough, fever, and expectoration. He would be better at times, and then severe fits of coughing would come on. One day, after riding on a comrade's neck, he had an unusually hard coughing spell, and ran to his mother, who put him across her knees and struck his back forcibly. Shortly after he went out to the door-step, and while coughing put his finger down the throat and drew out the pin. He has since been quite well.

Chloral Poisoning.—Dr. CAMERON reported a case of a lady who took one hundred and sixty grains of chloral hydrate at a single dose, for suicidal purpose. When seen three hours after, the pulse was eighteen, the pupils contracted, features pale. Believing that the chief indication was to support the failing heart, chloric æther. ♏xxx, was injected subcutaneously every half-hour for four doses, with marked improvement of the pulse and general symptoms. Emetics were employed, but very little came up in the vomiting. The patient made a good recovery.

Dr. PROUDFOOT mentioned that in Boston, when chloral first came into use, he gave sixty grains an hour, for six hours, to a man with delirium tremens. No dangerous symptoms followed; so far as he knew, the drug was good, having been imported from Germany.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, January 5, 1882.

E. L. DUER, M.D., PRESIDENT, IN THE CHAIR.

Extra-uterine Fœtation. — Dr. WILLIAM GOODELL reported the case of Mrs. B. C., aged thirty, who had been married two years without conceiving, but on March 19 her catamenia ceased, and she deemed herself pregnant. She now began to suffer very much from nausea and from pelvic pains, for which her physician, Dr. W. C. Parry, of Mount Holly, N. J., was in attendance more or less after May 6. On May 16, while ironing, she was suddenly taken with a violent colicky pain in her right groin, accompanied by a vaginal flow of blood and by collapse. These colics lasted off and on up to July 15, when she felt relieved. Dr. Parry had in the meantime discovered a pelvic tumor on the right side of the womb, and had diagnosticated extra-uterine fœtation. But from September 5 to 13 she had great bearing-down pains, like those of labor, attended by some hæmorrhage. The cervical canal dilated sufficiently to admit the finger; a miscarriage seemed imminent, but nothing was thrown off. This threw the physician off his track, and he renounced the idea of extra-uterine fœtation for that of natural pregnancy. She had felt fœtal movements, but from this time the child was still and milk appeared in the breasts.

Her health now began unaccountably to fail, she lost flesh and strength, and became bed-ridden. During the first week of last November, she had another hæmorrhage, with labor-like pains, and the cervical canal and os externum again dilated during the disturbance. From this time she began to fail very rapidly, having chills, a high temperature, a frequent pulse, and quick emaciation. On November 15, I was called in to see her. On account of the excessive tenderness of the parts, ether was given. An irregular tumor occupied the abdomen, but smaller than the uterine globe at eight months' gestation; neither fœtal limbs nor the fœtal outline could be felt, nor could the presence of any fluid be made out. The cervix uteri was in a natural position, quite hard, and with a small os externum. The sound passed in five inches, and to the left. No fœtal sounds or uterine murmur could be detected. My diagnosis was a guarded one, but leaned to an extra-uterine gestation. On November 24, aided by Dr. B. F. Baer, of Philadelphia, and by Drs. W. C. Parry, A. E. Budd, and R. E. Brown, of Mount Holly, I performed the operation of laparotomy. As soon as the peritoneum was cut open, an adventitious cyst was exposed. I perforated it with a probe, and enlarged the opening with a uterine dilator. Finding that the placenta covered the whole lower three-fourths of the sac, I prolonged the opening upwards and removed the fœtus. It was macerated, and had been dead some time, as the flesh over the ribs was stripped off during the process of extraction. The placenta was now very slowly and carefully stripped off without any hæmorrhage; every preparation had been made to meet one. Not any liquor amnii was present. The sac was then thoroughly cleansed with a carbolated solution, and every antiseptic precaution taken. The opening in the sac was stitched to that of the abdomen; a glass drainage-tube put in, and the wound dressed with salicylated cotton. Up to December 9 everything went well. The wound united perfectly, the stitches were taken out, the temperature had fallen, and the drainage-tube was about to be removed, when near midnight she very unaccountably went into convulsions; these recurred, and she died comatose on the morning of the 12th. Albumen was found in the urine, and at an autopsy the kidneys were found to be diseased. The fœtal sac had become obliterated, and no relation whatever could be discovered between the condition of extra-uterine fœtation and that of the kidneys which carried her off—the latter seemed to be an accident, and in nowise related to the former. From the history of this case, there is no question, in my mind, that the operation of laparotomy for extra-uterine fœtation must be far more successful after the death of the child. For when the

child is living, it would, on account of the inevitable hæmorrhage, be unjustifiable to remove the placenta; and the presence of so large a mass, which must slough off and putrefy, will seriously compromise the life of the woman. But when the child has been dead for some time, the placenta can be safely peeled off and the sac be wholly emptied, as in my case.

A Successful Case of Hysterectomy.—Dr. GOODELL also reported the following case. The patient, a mulatto of thirty-five, had cystic degeneration of each ovary. The pelvic and intestinal adhesions were of the most formidable character, making in themselves a long and a bloody operation. But in addition to these complications, each ovary was so incorporated with the womb that he was obliged to remove that organ. This he did by dissecting off the bladder, by applying the wire-clamp at a point midway between the os externum and the os internum, and by transfixing the stump with two pins. Strange as it may seem, on the fourth and fifth days quite a smart menstrual flow, or rather a metrostaxis, took place from this small cervical fragment. The clamp fell off on the fourteenth day, leaving a very large and deep funnel-shaped opening, which is now rapidly filling up. It is now three weeks since the operation, and the patient is convalescent. He stated that ovarian tumors are rare in the colored race, this being the second case, only, which he had seen. On the other hand, fibroids of the womb and fibrocystic tumors are more common with them than with the white race.

Monocyst probably of the Ovary, but which Contained Limpid Fluid.—Dr. B. F. BAER exhibited a specimen with the following history: M. J. T., aged forty, single, catamenia regular. In October, 1880, she discovered an abdominal tumor in the centre of the hypogastrium. She has been growing thin in flesh with the growth of the tumor. It apparently has varied in the degree of tension, being sometimes more flaccid than at others. Physical examination revealed a cyst of the abdomen, not very tense, extending one hand's-breadth above the navel; the cervical resonance was very marked, dulness on percussion was also marked, and there was perfect fluctuation throughout the tumor. The womb was movable, flexed to the right, and lay behind the tumor. The sound passed three inches. From the flaccidity of the cyst, I was at first inclined to believe it to be a cyst of the broad ligament; but the rapid growth of the tumor, and the quick emaciation of the patient, pointed rather to an ovarian cyst. On Dec. 31, 1881, the tumor was removed by Prof. Goodell. It was found to occupy a position to the left of the uterus, and was at first thought to be a cyst of the broad ligament, for the following reasons. It was a thin-walled monocyst, and contained a perfectly limpid fluid. The Fallopian tube was stretched over the surface of the tumor and elongated, the fimbriæ were spread out on the wall of the cyst. But after a very careful search the ovary could not be found. In a cyst of the parovarium, the ovary usually occupies a position on the side of the tumor, more or less closely attached to it by a mesovarium. After the pedicle had been ligated and the tumor cut away, another careful search was made for the ovary, both in the pelvis and on the cyst, but it was not found. The right ovary was found in the normal position, and was healthy. The only portion of the cyst-wall which in any way resembles the remains of a degenerated ovary, is a dense white substance, corresponding in position to that which would probably be occupied by the ovary; but this forms part of the cyst-wall, as the tunica albuginea does in ovarian cystic disease, and there is no sign of an attachment by a mesovarium.

The interest in this specimen hinges on the organ from which it was developed. If it could be proven that it originated in the parovarium, then it is of no special interest, because the arrangement of the external and middle coats allows them to be readily separated from one another, and the Fallopian tube is related to the cyst-wall in the manner described by Dr. Bantock as peculiar to parovarian cysts; the fluid furnished by it also corresponds to that usually found in such a cyst. But if it is a monocyst of the ovary, it then becomes of special interest, for it is denied by several recent writers (Bantock and Tait, for instance) that monocystic tumors ever occur in the ovary, but that when such a cyst is found it is always of parovarian origin. Now that seems to be too sweeping a statement, for many eminent authors, among them Wells, Peaslee, and Atlee, speak of having met with unilocular ovarian cysts; and I can recall a case of a large monocyst, removed by Dr. Goodell from a young lady of twenty years, in which the history, the relative position of the Fallopian tube to the cyst-wall, the close adherence of the different coats to one another, the albuminous fluid rich in cells, and the absence of the ovary, pointed pretty clearly to ovarian disease rather than to parovarian.

I also present another specimen, which proves beyond a doubt that a monocyst may occur, at least while the cyst is small. This specimen was removed by Dr. Goodell from a lady twenty-two years of age. It presents a single cyst in each ovary, and, in addition, a cyst in the broad ligament of one side.

Again, if the specimen first exhibited originated in the ovary, it presented an unusual feature in the character of its fluid, which was limpid and devoid of cells. If it did not spring from the ovary, why could not that organ be found? It could hardly be congenitally absent, when all the organs in its neighborhood—Fallopian tube, broad ligament, and parovarium—were present.

Dr. GOODELL did not consider this cyst one of the ovary, simply because the corresponding ovary could not be found, for one cannot make a prolonged search at such a time. Besides, he had never seen such a clear fluid from an ovarian cyst. Again, another diagnostic point of a broad ligament cyst is the alternations of tenseness and flaccidity; so this cyst was sometimes quite tense and at others so relaxed as to make it quite difficult to define its outlines. An ovarian cyst, on the contrary, is always tense, even if it has been recently tapped, but refilling. Further, the peritoneal and other layers of the wall of an ovarian cyst are so firmly matted together by the cicatrices made by the escape of Graafian follicles, that they cannot be easily separated. In this specimen the layers are, like those of a parovarian cyst, very easily torn apart. He himself had no doubt that the cyst is one of the parovarium.

Dr. T. M. DRYSDALE believed that a thorough search of the cyst might disclose the presence of the ovary, as he had, in several cases of tumor of the broad ligament, discovered the missing ovary spread over and incorporated in the cyst-wall. He also considered the limpid fluid, free from cells, an incontrovertible diagnostic point.

NEW INVENTIONS.

A NEW ASPIRATOR AND STOMACH-PUMP.

Feeling the importance of the more general distribution of such a useful and necessary instrument as the aspirator, and believing that the great costliness of the present instrument is the main obstacle to its more general use, Dr. GEORGE T. MILLER, of Byronsville, Ga., has, with the assistance of Messrs. George Tiemann & Co., of New York, been able to devise such an instrument as, is hoped by its cheapness, will remove this

hinderance, and by its effectiveness and simplicity meet with general favor.

The instrument is made of hard rubber in the main. The metallic portion is nickel-plated. 1. Pump. 2. Flexible tube with glass tube inserted, used for exhausting. 3. Needle. *a*. Stopcock. *b*. Nozzle for attachment of exhaust tube. *c*. Nozzle for attachment of escape tube. *d*. Thumbscrew for working stopcock, *a*.

To use the instrument attach one end of tube 2 to the selected needle and the other to nozzle, *b*. Attach a piece of tubing to nozzle, *c*, for conducting pus, etc., to a suitable vessel, and then, after introducing the needle, turn the thumbscrew, *d*, in the line, *a*, *b*, and then draw out the piston; when the pump is full turn the thumbscrew, *d*, in the line, *a*, *c*, and shove down the piston. This action may be repeated as often as necessary. If desired the needle can be attached directly to point, *b*. It will be perceived that this instrument can very readily be used for injecting a solution into a cavity, as well as evacuating its contents, by simply reversing the action of thumbscrew, *d*.

It can also be used as a stomach-pump, and with one of George Tiemann & Co.'s soft-rubber "velvet-eyed" stomach tubes it is always ready for an emergency, and very effective. And further, it can be used for any purpose that a Davidson syringe can, if only the proper tubes are attached to nozzle, *b*, all of which are obtainable from the makers, Tiemann & Co.

Dr. Miller claims that this instrument is equally effective as the most costly; that it is less liable, from its simplicity of construction, to become disordered; that from its low price, it is within the reach of all practitioners, and that from its extended uses it fulfils a long-felt desideratum.

NEWS ITEMS.

BALTIMORE.

(*From our Special Correspondent.*)

Physiology of the Isolated Mammalian Heart.—At the Johns Hopkins University, Professor Martin is continuing his experiments on the physiology of the isolated mammalian heart. His method of procedure is as follows, viz.: A cannula is put into each common carotid trunk, and another into the left subclavian. The right subclavian is ligated, as is also the aorta immediately beyond the origin of the left subclavian. In this way, all flow through the systemic arteries, except the coronaries of the heart, is prevented. Next, the inferior cava is tied just above the diaphragm, and then the azygos vein; a cannula connecting with a reservoir of fresh, warm, defibrinated blood is tied into the vena cava descendens close to the heart. Blood from the reservoir is supplied to the right auricle, and, simultaneously, bleeding is carried on from the cannula in the right carotid, until all the blood originally contained in the heart and lungs of the animal (dog) is washed out and replaced by defibrinated blood. The animal is then transferred to a warm, moist chamber, kept at a uniform temperature of 37° C. by an automatic gas regulator. In this chamber are two Marriott's flasks, filled with warm, defibrinated blood; their outflow tubes unite in a common tube, which is attached to the cannula in the vena cava descendens. From the Marriott's flasks the heart is supplied readily with fresh blood, under a uniform pressure and at a constant temperature. So soon as one is empty, its outflow tube is closed and that of the other opened, so that the experiment goes on for hours without interruption. The cannula in the left carotid of the dog is connected with an outflow tube supplied with a stopcock; the latter is opened so far as to permit a certain proportion of the blood which has entered the right auricle, traversed the lungs, and been expelled by the left ventricle into the aortic arch to flow out into a beaker; the rest of the blood, propelled by the heart, must pass through the vessels of that organ, no other way being open. The cannula in the left subclavian is connected with a mercurial manometer, whose pen records arterial pressure and pulse-rate on the paper of a kymograph in the usual manner. Uniform artificial respiration is maintained by a small water engine.

In this way, the heart of the dog or of the cat may be kept alive for hours (in one case for seven hours), beating with perfect regularity, and maintaining a normal arterial pressure. All this time there is no circulation in any other organ of the body, but the lungs; brain, spinal cord, and sympathetic, die within a short time, and the muscles pass into a state of rigor. The heart and lungs are completely physiologically isolated. With uniform artificial respiration, the influence of the lungs upon the heart is constant throughout an experiment. An artificial lung is, however, in course of preparation. Professor Martin has recently completed a series of experiments relating to the influence of variations of arterial pressure upon the rhythm of the heart-beat. A rise of arterial pressure when the pneumogastrics are intact, is known to slow the pulse-rate by excitation of the medullary cardio-inhibitory centre; and after the vagi are cut, to quicken it, indirectly, by stimulating the medullary centres of the accelerator nerves of the heart. When all extrinsic cardiac nerves are divided, the results obtained by different experimenters vary in every conceivable way. Some find that higher arterial tension quickens the pulse; others, that it slows it; and some, that it has no effect; others again find all of the above three different results in different experiments. The reason of this diversity is not far to seek; the methods employed to vary arterial pressure (compression of the thoracic or abdominal aorta, or injection of blood from another animal into an artery of the experimental animal), change many things besides arterial tension; for example, rate of inflow to the auricle, pressure in the veins opening into the auricle, and hence in the right auricle itself, temperature of the blood, and chemical composition of the blood. All these secondary effects having been ignored, the origin of contradictory results of previous workers is readily seen. In Professor Martin's experiments, blood is supplied, under uniform pressure and at uniform temperature, to the right auricle. Arterial pressure is varied by opening or closing the stopcock on the outflow tube from the left carotid. The artificial respiration being uniform, arterial pressure is the only condition changed under these circumstances. He finds that within physiological limits, variations of

arterial pressure have not the slightest direct influence upon the pulse-rate. In small dogs, pressure in the subclavian may be varied from one hundred and sixty to twenty millimetres of mercury, and the number of heart-beats per minute remains absolutely unchanged. An increase or decrease of arterial pressure *per se*, has no effect on the pulse rhythm. When the variations of arterial pressure are so great as to become pathological, then changes in the heart's rate follow them. For example, if arterial pressure (measured in the subclavian), is kept for a moment at about fifteen millimetres of mercury, then not enough blood is driven through the coronary arteries to nourish the heart, and its beat becomes slower. On the other hand, if the exit stopcock be nearly closed, and the inflow to the right auricle be considerably increased, more blood reaches the left ventricle in its diastole than it can force out during its systole, through the narrowed aperture of the stopcock, and through the coronary arteries, the only paths open. The heart-beat, then, is profoundly modified; it becomes markedly slowed and dicrotous, a powerful systole, apparently half emptying the ventricles and being immediately followed by a less marked beat, which is succeeded by a pause before the next powerful systole occurs. The defibrinated blood referred to, has been in most cases simply whipped and strained blood from other dogs; in some cases, of late, this has been diluted with one-third its bulk of a 0.7 per cent. solution of pure sodium chloride in distilled water, with satisfactory results. Quite recently, defibrinated calf's blood has been used, with success, to nourish the isolated dog's heart. Professor Martin is at present engaged in investigating the action of varied pressure in the veins opening into the right auricle, and of varied temperatures upon the pulse-rate of the isolated mammalian heart. Two of his students are studying the action of digitalin upon it. Dr. Sewall, associate in physiology, is studying the influence of pneumogastric stimulation upon the isolated mammalian heart, with varied pressure in the right auricle. This line of research will, doubtless, lead to very important results.

CINCINNATI.

(*From our Special Correspondent.*)

ADULTERATION OF SUGAR.—The local societies are well attended this winter; numerous papers have been presented, and the discussions which followed them have been full of interest.

The winter session of the Academy of Medicine was opened by a paper by Dr. James G. Hyndman, which consisted of a report on the examination of samples of white sugar for muriate of tin, the agent so often employed in the bleeching process. Six different specimens of sugar—representing the product of four refineries—were examined, and all with negative results. The presentation of this paper led to a more general discussion on adulteration of various staple articles of food.

PREVENTION OF LACERATION OF THE PERINEUM.—Dr. Thad. A. Reamy recently delivered an address before the Academy of Medicine on his new method of preventing laceration of the perineum. He prefaced his remarks by a brief reference to the anatomy of the parts, and an account of the various means hitherto employed in the attempts to prevent laceration. His own plan consists in placing the patient on her back in the usual forceps position (the limbs being flexed to the greatest degree practicable), and stretching smoothly over the patient's bulging perineum a towel, the extremities of which are held beyond the gluteal masses on either side by his own or his assistant's hands. The perineum is not touched except by the towel, and all the tension is made from the ends of the towel. Applied smoothly in this manner, with its upper border on a level with the posterior commissure, and the posterior border extending to a point opposite the coccyx, the towel forms a supplementary perineum, which, while remaining untorn, effectually prevents rupture of the tissues beneath. The doctor had tested his plan thoroughly in private practice, and had also demonstrated its utility in a recent case of forceps delivery before his class at the college. He was perfectly assured of its effectiveness, and recommended resort to it in cases of forceps delivery, and in other cases, especially in primiparæ when any disproportion existed between the size of the head and the vulvar orifice. The plan is also applicable in the prevention of laceration by the shoulders, and the towel should not be removed until after their delivery.

MONTREAL.

(*From our Special Correspondent.*)

LAVAL UNIVERSITY.—The Laval University question, which has excited so much interest here for the last three years, has been at last settled by decrees from Rome. The point at issue was, briefly, this: Laval, at Quebec, is the only Catholic university in the province, and is in the hands of the more liberal section of the clergy. The French Canadians in Montreal have long wished for another university, but have never been able to get the consent of the church authorities. In 1876, Laval decided to establish a branch (succursal) in Montreal, with full faculties, and as there was already a French medical school, arrangements were made to take over its teachers as professors in the medical faculty; indeed, the names were printed. At the last moment the agreement was annulled, and the majority of the teachers in the L'École de Médecine decided to stand by the old institution, and have nothing to do with Laval. A number of the active members of the school remained firm to their agreement with Laval, and a medical faculty was organized. The contest has been chiefly between these rival schools; the old L'École de Médecine, backed by a large section of the Montreal clergy and several bishops, has contested the legality of the Laval branch, as her charter defined her location at Quebec. In this they had the support of Sir Farrar Herschel, the Solicitor-General of Great Britain. An act was obtained in the local Legislature, extending the Laval charter so as to cover the Montreal branch. But the real struggle has been at Rome, to which both parties appealed, and to which deputations have been sent. The latest news is that the sacred congregation has finally decided in favor of Laval. Our French brethren are faithful sons of the church, and settle their disputes in a good old mediæval way. The Laval faculty at Montreal has been very energetic. A good school-building has been procured, and a new hospital established (Hospital de Notre Dame), as the Hotel Dieu is entirely under the medical control of the L'Ecole de Médecine.

LIBRARY OF THE SURGEON-GENERAL'S OFFICE.—From the annual report of the Surgeon-General we learn that nearly 2500 volumes and 3200 pamphlets have been added to the library during the past year, making the total number about 54,000 volumes and 60,200 pamphlets.

The publication of Volume II. of the *Index Catalogue* has been completed, and the edition of 1500 copies is being distributed. The manuscript of Volume III. is now going to press. An estimate has been forwarded for printing Volume IV. of the *Catalogue*, and it is hoped that the appropriation asked for will be

granted, in order that the progress of this important work may not be retarded.

It is earnestly recommended by the Surgeon-General, and by the President in his message to Congress at the commencement of the last session, that an appropriation be made for a new fire-proof building, adequate for the present needs and reasonable future expansion of these valuable collections. Such a building, absolutely fire-proof, it is believed could be erected for $250,000.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.—The annual meeting of the College was held on Wednesday evening, January 3, when the following officers were elected for the ensuing year: President, Dr. W. S. W. Ruschenberger; Vice-President, Dr. Alfred Stillé; Secretary, Dr. R. A. Cleemann; Treasurer, Dr. Charles S. Wurts.

Dr. Stillé, Chairman of the Library Committee, reported that the total number of volumes in the library was 22,419, of which 16,405 belonged to the general library, 6014 to the Lewis library. The total increase during the year was 1040 volumes.

UNIVERSITY OF PENNSYLVANIA.—The Provost of the University, Dr. William Pepper, has petitioned the Councils of Philadelphia to transfer to the University, for a nominal sum, the tracts of land belonging to the city, and lying adjacent to the present University site for the erection of a school of veterinary science, and a hospital for domestic animals, dormitories, museums, training-school for nurses, and free library.

The trustees agree in return to devote the property entirely to educational purposes, to maintain fifty scholarships for students from the public schools of Philadelphia, and to pay an annual ground-rent to the city, or principal sum in lieu thereof. The petition and the proposed ordinance, with a strong recommendatory letter from the Mayor, were referred by Councils to the Committee on Finance and City Property, which has since reported unanimously in their favor.

Ground has been broken for the Henry C. Gibson Ward for Incurables, and it is believed that this addition will be ready for occupation next summer.

NEW HAMPSHIRE DISTRICT MEDICAL SOCIETY.—The annual meeting of this Society was held at Concord last week, Dr. George Cook, Vice-President, in the chair. Papers were read by Dr. George H. Sanborne, Dr. Fowler and Dr. Walker. Dr. Watson, Secretary of the Board of Health, made some remarks concerning drainage.

The following officers were elected for the ensuing year: President, Dr. George Cook; Vice-President, Dr. D. P. Goodhue; Secretary, Dr. George C. Blaisdell; Treasurer, Dr. H. M. French.

The next meeting will be held in April.

PRESBYTERIAN HOSPITAL, PHILADELPHIA.—The Trustees of this hospital have just authorized the formation of a dispensary service for diseases of the ear, and have placed it in charge of Dr. Charles H. Burnett, well known as the author of an excellent systematic work on the diseases of the ear. It is proposed to utilize this service for the purposes of clinical instruction.

A NEW COLLEGE OF PHARMACY.—The Governors of Union University have organized a department of pharmacy, to be known as the "Albany College of Pharmacy." The lecture-rooms and laboratories of the Albany Medical College will be used for the purposes of the college of pharmacy. The course of instruction is graded, and the faculty consists of Dr. Jacob S. Mosher, Professor of Botany and Materia Medica; Willis G. Tucker, M.D., Professor of Chemistry; Gustavus Michaelis, Professor of Pharmacy.

THE WARREN TRIENNIAL PRIZE.—The Warren Prize Committee offer a premium of $400 for the best dissertation worthy of a prize, upon the following subject: "Chronic Bright's Disease (parenchymatous and interstitial nephritis); the Nature and Mutual Relations of the Disturbances of the Circulatory and Secretory Organs." Dissertations should be forwarded to the Resident Physician, Massachusetts General Hospital, Boston, on or before February 1, 1883.

MEDICAL EDUCATION.—The Report of the U. S. Commissioner of Education states that during the year 1879 the degree of Doctor of Medicine was conferred by "regular" Colleges (68 in number) on 2759 candidates. During the same year there were in the United States eleven training schools for nurses, with 51 instructors, 298 pupils, and 141 graduates.

THE MISSOURI MEDICAL COLLEGE has organized a post-graduate school, with a faculty of thirteen, composed in part of the members of the regular faculty, and in part of distinguished specialists, not members of the faculty. The course covers the whole range of practical medicine. It begins February 20, and will continue for six weeks.

HEALTH IN MICHIGAN.—The State Board of Health, in its *Bulletin* for the week ending January 7, states that the reports indicate that bronchitis and influenza increased considerably, and that erysipelas, tonsillitis, and puerperal fever decreased considerably, in area of prevalence.

Up to date, small-pox is reported at Detroit, Bay City, Grand Rapids, Kalamazoo, South Haven, and near Monroe. A new case was brought to Grand Rapids from Chicago, January 9. Vaccinations are general in many parts of the State.

THE PARIS FACULTY.—Prof. VULPIAN resigned on the 17th of November the position of Dean of the Faculty of Medicine of Paris, a position which he has held since December, 1875. A vote of thanks for his past services and regret at his resignation was unanimously passed by his colleagues. Prof. Béclârd has been nominated as his successor.

It is understood that owing to the appointment of M. Paul Bert to be Minister of Public Instruction, Prof. Vulpian considered that the period of his usefulness as Dean of the Faculty had come to an end.

CONSULTATIONS WITH HOMŒOPATHS.—The Royal College of Physicians of London have adopted the following resolution without a dissenting vote:

"While the College has no desire to fetter the opinion of its members in reference to any theories they may see fit to adopt in connection with the practice of medicine, it nevertheless considers it desirable to express its opinion that the assumption or acceptance by members of the profession of designations implying the adoption of special modes of treatment is opposed to those principles of the freedom and dignity of the profession which should govern the relations of its members to each other and to the public. The College therefore expects that all its fellows, members, and licentiates will uphold these principles by discountenancing those who trade upon such designations."

Suffice it to say that Dr. Wilks, in moving the resolution, said it was not directed against *opinions*, but against quackery, which he defined as trading in treatment, homœopathy being, therefore, the "quintessence of quackery."—*Lancet*, Dec. 31, 1881.

DEATHS UNDER ETHER.—In recent numbers of the *Lancet* (August 27 and September 3), there are reported two more deaths under the administration of ether; in one case, that of a woman of fifty, who was being operated on for the removal of a tumor from the jaw, death could be attributed to collapse from profuse hæmorrhage and interference with breathing from cancerous deposits in the lungs, which, however, were only revealed by the post-mortem examination. At the inquest, it was decided that death resulted from the effects of the operation, but that "said operation was in all respects skilfully and properly performed." In commenting on this case, the *Lancet* advises that when an operation is about to be performed, in which the danger from suffocation is increased by the operation itself, it is safer, all things being taken into account, to administer a quickly-acting anæsthetic, like methylene, rather than ether, and that in all diseases of the lungs, the anæsthetics of the chlorine group are safest and best.

The second case can more properly be called a death *from* ether. The patient was a miller, aged forty-eight, and the operation was consequent upon the patient having run a rusty bill-file into the middle finger of the right hand. The patient had suffered from rheumatism, but the heart was normal. Under the administration of ether, and before the patient was anæsthetized, respiration suddenly ceased. Artificial respiration was resorted to, but without avail. The verdict at the Coroner's inquest was death from syncope, but the *Lancet* believes that the death in this case also can be attributed to the lungs, which were supposed, in the absence of any evidence, other than the man's occupation, to be emphysematous. In this case, also, it believes that methylene would have been a safer anæsthetic, or even local anæsthesia might have been employed.

The *Medical Times and Gazette*, for December 24, reports the death of a laboring man, sixty-seven years of age, who died while being etherized, from the entrance of blood into the trachea from a compound wound of the jaw. The operation proposed was the suturing of the bone fragment with wire.

M. PASTEUR'S VACCINATIONS.—Statistics brought up to October 1 show that the inoculations of splenic fever, according to Pasteur's method, were performed on 160 flocks, comprising 68,900 sheep, of which 33,576 were vaccinated, and 21,938 animals were left uninoculated, so as to judge of the results of the difference of treatment. Before vaccination, the losses caused by splenic fever amounted, on the whole of the flocks, to 2986 animals. During vaccination, and until its effects were perfected, 260 sheep out of the whole number of 33,596 perished. During the same period, the mortality rose to 366 out of the group of 21,938 which were not vaccinated. When the effects of vaccination were complete in the first group, the mortality from splenic fever fell to five. This rate has persisted up to the present time; and the next statistical account will give, it is expected, the same satisfactory results as regards the groups of animals vaccinated and left unvaccinated.—*British Med. Journ.*, Nov. 19, 1881.

COHN ON THE EYES OF MEDICAL STUDENTS.—Dr. Cohn (*Med. Jahbr. d. K. K. Gesell. d. Aerzte. z. Wien.*, 1881), says that fourteen years ago he found that 53 per cent. of the Catholic theological students, 55 per cent. of the law students, 56 per cent. of the medical students, 67 per cent. of the Evangelical divinity students, and 68 per cent. of the philosophical students, were myopic. In the summer of 1880, 59 per cent. of the medical students were myopic, 55 per cent. of the junior or non-clinical students, and 64 per cent. of the advanced or clinical, the longer studies of the latter being probably the cause of the higher percentage. In discussing the cause, Cohn says that the blame lies entirely upon the methods of study. The lecture halls are badly lighted, the benches and desks so arranged as to make writing most uncomfortable and difficult, the type of the text-books is too small, and the lines too long (straining accommodation when the eye passes from the ends to the middle), as well as too closely printed. He recommends that the light should fall fully on every spot in hall; that the benches should be 45 centimetres (17.7 nches) high, and 40 centimetres (15.8 inches) broad, while the desks should be 70–75 centimetres (about 29.5 inches) high, and 35 centimetres (13.8 inches) broad, to allow of easy writing. The type, he says, should be 1.5 millimetres (.06 inch) in size—of small *n* for example—and 0.25 millimetres (.01 inch) in thickness of line; the intervals between the lines should be at least 2.5 millimetres (.1 inch), and the lines should not exceed 100 millimetres (about 4 inches) from one side of the page to the other.—*London Med. Record*, Nov. 15, 1881.

ALBUMEN WATER is recommended as a good substitute for milk and beef-tea, in cases where these substances disagreed with the patient, or could not be obtained. The preparation is largely used by the French. It is made by dissolving the white of one or more eggs in a pint or two of water, sweetening with glycerin, and flavoring with orange-flower water. It may be taken cold and used *ad libitum*. It is an excellent food in typhoid fever and typhoid dysentery.—*Dublin Journ. of Med. Science*, Sept., 1881.

A GASTROSCOPE.—Dr. MIKULICZ, of Vienna, has perfected an instrument by which the interior of the stomach and œsophagus are submitted to direct inspection by means of an incandescent platinum electric light in a metal œsophageal tube. The instrument is described in the *Allgemeine Wien. Med. Zeitung*, Nov. 8, 1881.

LITHOLAPAXY IN EGYPT.—At the meeting of the Société de Chirurgie, held on December 7, reported in *Le Progrès Médicale*, December 10, 1881, M. Zancarœ read a long and interesting report of eighty-one cases of calculus, treated by different methods, in the Greek Hospital at Alexandria. M. Zancarœ gives decided preference to the Bigelow method, which he employed in fourteen cases.

A PAY HOSPITAL FOR WOMEN.—The experience of those connected with "The Seaside House for Invalid Women," at Atlantic City, has shown that there is greatly needed a pay hospital for women in moderate circumstances, who do not need and would not accept the assistance of the charitable.

The success of "The Seaside House" encourages the belief that a hospital for this class of women could, with a moderate rate of board, be made nearly if not quite self-supporting. The institution has most of the appliances needed for such a hospital, and instead of allowing them to remain idle during nine months in the year, it has been determined, as an experiment, to keep the house open this year.

Application for admission should be made to Dr. Bennett, No. 332 South Fifteenth Street, Philadelphia.

MEDICAL CONGRESS AT SEVILLE.—A medical Congress will be held at Seville, commencing April 9, 1882, lasting, for scientific discussion, until the 16th.

The transactions of the Congress will be published in the *Gaceta Medica de Seville*.

PERSONAL.—Prof. Freund, of Strasburg, has been offered the Chair of Obstetrics in Breslau, vacant by the

death of Prof. Spiegelberg, and has, it is reported, accepted it.

In the recently-published number of this *Archiv*, Prof. Virchow has published a letter of thanks to all who took part in the recent demonstration in his honor. He regrets that he is unable to thank each personally; but he is convinced that the expressions towards him were heartfelt, and to each one he returns his most cordial thanks.

NEW JOURNALS.—The first number of the *New England Medical Monthly*, under the editorial direction of Wm C. Wile, M.D., appeared in the latter part of last year; it is a fifty-page octavo journal with a well-filled table of contents, and presents an attractive appearance. It is published in Newtown, Conn.

The first number of the *Detroit Clinic*, a new weekly medical journal, which appears to derive its support from the Detroit Medical College, has been issued with the date of January 4, 1882. It is a neatly-printed octavo of sixteen pages of text.

The *Rocky Mountain Medical Review* has, on account of the removal of Dr. A. W. Adams from Colorado, been merged into the *Rocky Mountain Medical Times*, a handsome monthly journal, under the editorship of Drs. T. H. Hawkins and F. A. E. Disney.

NOTES AND QUERIES.

CONGENITAL BRONCHOCELE.

To the Editor of the MEDICAL NEWS.

SIR: Has there ever been any notice or record of congenital bronchocele on this continent? All that I know of it in Europe, is the notice given it by Prof. Hartshorne in Reynold's *System of Medicine*, where he notices its occurrence in France and Derbyshire, England.

I had a well-marked case of it in this city, where the disease is not common and only sporadic. There could be no mistake about the diagnosis, as the case was plain. There was no history of heredity. Parents of good form; tall, young, handsome, intelligent, and of long-lived stock. Mother, fourteen months previous, in her first labor, at seven months, I delivered by severe force of a frog-like monstrosity.

The child, in this last accouchement, was a girl, otherwise well formed, and healthy. The tumor, which was large and produced so much deformity that it created much sadness in the household for a time, gradually disappeared, and was not noticeable after a few weeks. Two kinds of applications were made with gentle pressure. One composed of turpentine spirits, camphor, and iodine in glycerin; and another, ergot and glycerin. The tumor was soft, and seemed to be highly vascular.

I am, sir, yours, etc.

M. R. MORDEN.

ADRIAN, MICH.

[Congenital bronchocele is undoubtedly a very rare malformation, but it has been observed.—ED.]

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 4, TO JANUARY 16, 1882.

TREMAINE, W. S., *Captain and Assistant Surgeon.*—Now awaiting orders in New York City, to report in person to the commanding general, Department of the East, for assignment to duty.—*S. O. 2, A. G. O., January 4, 1882.*

POWELL, J. L., *First Lieutenant and Assistant Surgeon.*—The seven days leave of absence granted him in order 186, Fort Stockton, Texas, is extended fifteen days.—*O. 159, Department of Texas, December 27, 1881.*

CARTER, W. F., *First Lieutenant and Assistant Surgeon.*—The seven days' leave granted him by order 195 c. s., Fort Concho, Texas, extended one month, providing he furnish an acceptable substitute during his absence, without expense to the United States.—*S. O. 160, Department of Texas, December 29, 1881.*

GORGAS, WM. C., *First Lieutenant and Assistant Surgeon.*—The leave of absence granted him by Par. 5, S. O. 150, Headquarters Department of Texas, December 3, 1881, is extended one month.—*S. O. 1, Military Division of the Missouri, January 4, 1882.*

MADDOX, THOMAS J. C., *First Lieutenant and Assistant Surgeon.*—Now awaiting orders in Washington, D. C., to report in person to the commanding general, Department of Texas, for assignment to duty.—*S. O. 2, A. G. O., c. s.*

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE, FROM OCTOBER 1, TO DECEMBER 31, 1881.

HEBERSMITH, ERNEST, *Surgeon.*—Relieved from duty at San Francisco, Cal., and placed on waiting orders, November 7, 1881. Relieved from waiting orders, November 26, 1881.

VANSANT, JOHN, *Surgeon.*—Granted fourteen days' leave of absence, October 18, 1881. To proceed to San Francisco, Cal., and assume charge of the service at that port, November 8, 1881.

MILLER, T. W., *Surgeon.*—Granted leave of absence for seven days, October 6, 1881.

PURVIANCE, GEORGE, *Surgeon.*—To proceed to Boston, Mass., and assume charge of the service at that port, November 8, 1881.

AUSTIN, H. W., *Surgeon.*—To proceed to Galveston, Indianola, Corpus Christi, and Brownsville, Texas, as Inspector, October 17, 1881.

FISHER, J. C., *Passed Assistant Surgeon.*—To proceed to Yorktown, Va., as Inspector, October 14, 1881. Detailed as member of Board for the examination of keepers and crews of the Life-Saving Service, Third District, November 18, 1881.

GOLDSBOROUGH, C. B., *Passed Assistant Surgeon.*—Detailed as member of Board for the examination of keepers and crews of the Life-Saving Service, Fifth and Sixth Districts, November 2, 1881.

O'CONNOR, F. J., *Assistant Surgeon.*—Granted leave of absence for fifteen days on account of sickness, December 23, 1881.

GUITERAS, JOHN, *Assistant Surgeon.*—Granted leave of absence for ten days, December 5, 1881.

BENSON, J. A., *Assistant Surgeon.*—Granted leave of absence for twenty-one days, December 7 and 21, 1881.

BANKS, C. E., *Assistant Surgeon.*—To assume temporary charge of the service at San Francisco, Cal., until the arrival of Surgeon Vansant, November 7, 1881.

CARMICHAEL, D. A., *Assistant Surgeon.*—To proceed to Baltimore, Md, for temporary duty, November 2, 1881. To rejoin his station (New York), and thence proceed to Pittsburg, Pa., and assume charge of the service at that port, November 18, 1881.

BENNETT, P. H., *Assistant Surgeon.*—To proceed to Boston, Mass., for temporary duty, October 21, 1881.

PECKHAM, C. T., *Assistant Surgeon.*—To report for temporary duty to Surgeon-in-charge, Boston, Mass., October 21, 1881. To proceed to Vineyard Haven, Mass., for temporary duty, November 4, 1881. To rejoin his station (Boston), and thence proceed to New York, reporting for duty to Surgeon-in-charge, November 9, 1881.

AMES, R. P. M., *Assistant Surgeon.*—To proceed to St. Louis, Mo., for temporary duty, October 21, 1881. To proceed to Evansville, Ind., for temporary duty, December 24, 1881.

DEVAN, S. C., *Assistant Surgeon.*—To proceed to San Francisco, Cal., for temporary duty, October 21, 1881.

URQUHART, F. M., *Assistant Surgeon.*—To report for temporary duty to Surgeon-in-charge, New York, N. Y., October 21, 1881.

APPOINTMENTS.—The following candidates, having passed the examination required by the Regulations, were appointed Assistant Surgeons, by the Secretary of the Treasury, October 20, 1881:

PHILO H. BENNETT, M.D., of New York; CYRUS T. PECKHAM, M.D., of Massachusetts; ROBERT P. M. AMES, M.D., of Pennsylvania; SPENCER C. DEVAN, M.D., of Missouri; and FRANCIS M. URQUHART, M.D., of New York.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XL. SATURDAY, JANUARY 28, 1882. No. 4.

ORIGINAL LECTURES.

CARTWRIGHT LECTURES.

ON THE EXPERIMENTAL METHOD IN MEDICAL SCIENCE.

Delivered before the Association of the Alumni of the College of Physicians and Surgeons, New York, January 24, 1882.

BY JOHN C. DALTON, M.D.,

PROFESSOR OF PHYSIOLOGY IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

LECTURE I.

GALVANI AND GALVANISM IN THE STUDY OF THE NERVOUS SYSTEM.

MR. PRESIDENT AND GENTLEMEN OF THE ALUMNI: In discharging the agreeable duty, which you have kindly imposed on me, of giving the Cartwright Lectures for this year, I propose to offer a few historical sketches, which shall illustrate the manner in which certain parts of our scientific knowledge in medicine have been attained. The connection between scientific and practical medicine is, furthermore, so close that permanent improvement in the one is inseparably dependent on that of the other; but this connection becomes much more evident when we trace the history of any particular department for a considerable period of time. By this means we can see how much of the doctrine accepted by our predecessors has survived the ordeal of a century, and what were the methods of investigation which produced, in their hands, the permanent results which we enjoy to-day.

However much we may pride ourselves on the advances made during our own time, we may be sure that by far the greater part of our actual knowledge is a legacy from the past. It has been winnowed in successive generations from the errors and imperfections which always accompany its first acquisition; and it is probable that many of our own discoveries will require a similar depleting treatment in the future. But we may learn to rely with confidence on such methods of study as have heretofore proved valuable; and we may, perhaps, save ourselves the trouble of exploring certain paths, when we see that others have followed them before and have found that they lead nowhere.

If we can say that any one department in physiology, pathology, and therapeutics is now distinguished by a special activity of investigation and growth, it is probably that of the nervous system. A very large part of this advance has been made by the application of electric stimulus in determining the motor or sensitive properties of different nerves—their influence on the heart and bloodvessels, the localization of special centres in the brain and spinal cord, or the diagnosis of morbid alterations in the cerebro-spinal axis, and the use of electricity in restoring the power of movement or sensation, when impaired by disease, is now acknowledged to be, in many cases, a most serviceable means of cure. This has all come, directly or indirectly, from the experiments of Galvani, nearly a hundred years ago, on the nerves and muscles of the decapitated frog.

In 1789, Galvani was Professor of Anatomy in the University of Bologna. In addition to the regular duties of his professorial chair, he had made a number of valuable investigations in comparative anatomy; such as those on the structure of the kidneys and urinary ducts in birds, and on the organ of hearing in the same class. Like most of the scientific men of his day, he was greatly interested in the phenomena of electricity, which was then fast developing into an important department of physics. The condition of electrical science at that time was as follows: The machine, for producing frictional electricity by a rotating glass cylinder and cushion, had been brought to practical completion, and was in common use, with its prime conductor and insulating supports. The two opposite kinds of electrical excitement, known as vitreous and resinous, or positive and negative, were fully recognized, as well as the distinction between conductors and non-conductors; and even some of the phenomena of induced electricity were known, though explained in a manner somewhat different from that which is now in vogue.

Beside the electrical machine, experimenters were already in possession of the Leyden-jar, by which a large quantity of electricity may be stored in a given space; the electrophorus, by which a moderate charge of electricity may be generated; electrometers or electroscopes, for detecting the existence and amount of slight electric disturbances; and Volta's "condenser," in which small quantities of electricity, from a feeble source, might be accumulated and made apparent by the electrometer.

Finally, Franklin had shown, by his daring experiment with the kite in the thunder-storm, that the lightning of the clouds was identical in its nature with the spark from an electrical machine; and this had largely directed the attention of investigators to the study of atmospheric electricity, as compared with that produced by artificial means.

Considering the long list of results which have followed from Galvani's early observations, the manner in which they were first made is a topic of much interest.[1] He was in his laboratory, engaged on experiments with the electrical machine, and had, lying upon the table near by, a freshly dissected frog, prepared for some other purpose in such a way that the denuded hind legs were connected with the spinal column by the crural nerves. One of his assistants, accidentally touching the nerves of the animal with the blade of a scalpel, saw the legs convulsed; and on watching more closely, it was seen that the contraction occurred only at the moment of drawing a spark from the conductor of the machine.

Once Galvani's attention was attracted to so remarkable a phenomenon, his mind turned instantly to the investigation of its conditions. He abandoned all other occupations, and seemed absorbed in the attempt to detect its causes, and to learn their modes of operation. He determined in the first place that the discharge of the conductor and the contact of the scalpel with the frog's nerves were both necessary; for the muscular contractions would not take place with either of them alone. But even when both conditions were present, sometimes the muscles contracted and sometimes they did not. Puzzled by this variation, but still confident that it must have a reasonable cause, he at last found that it depended on the way the scalpel was held in the fingers. If grasped by the end of its non-conducting ivory handle, there were no convulsions in the legs when the spark was taken from the machine; but if

[1] Aloysii Galvani de Viribus Electricitatis in motu musculari Commentarius. De Bononiensi Scientiarum et Artium Instituo atque Academia Commentarii, Tomus Septimus 1791, p. 363.

held in such a way that the fingers touched the steel blade, or the rivets which held it in place, the muscles were always thrown into action. The human body, therefore, served as a conductor, and Galvani replaced it with success by an iron wire which he attached by one extremity to the spinal column, above the origin of the nerves, by a brass or copper hook, leaving the other end in communication with the ground. He varied the contrivance in many ways, turning sometimes the attached and sometimes the free end of the conductor towards the electrical machine, increasing or diminishing its length, and at last adding a second conductor, attached to the muscles of the leg. He took special pains to exclude the possibility of any direct transfer of electricity from his machine to the dissected frog, and yet convinced himself, by the aid of Volta's electrometer, that in some way or other an electric discharge passed through the frog and was the exciting cause of its convulsions.

These experiments were all performed with artificial electricity, obtained from the electrical machine. Galvani then passed to his second series of observations, to see whether a similar effect would be produced by atmospheric electricity. On the approach of a thunder-storm he arranged one of the conducting wires so that its upper extremity was in the open air near the roof of his house, and its lower extremity connected with the frog's spinal column, while the other wire, attached to the muscles of the leg, communicated below with the water in a well, and he then waited, like Franklin, for the discharge of a thunder-cloud. The result followed as before; and every peal was accompanied by a convulsive motion in the dissected frog. He especially noticed that the convulsions were simultaneous not with the sound of the thunder, but with the electric discharges; for, as he says, "the muscular contractions and movements of the animal, like the visible splendor of the lightning flash, always preceded the thunder-clap, and, as it were, gave notice that it was coming."

So far Galvani had not really touched upon his final discovery. The phenomena of muscular contraction, in these two sets of experiments, were due, as we now know, to the action of induced electricity.

When he charged the prime conductor of his electrical machine, or when the thunder-cloud was passing over his house, an imperceptible but real disturbance of the electric equilibrium took place by induction in the wires attached to his dissected frog; and when the original electrical tension expended itself in a discharge, there was a similar reaction in his conducting wires, a reaction which necessarily passed through the nerves and muscles of the frog, and threw it into convulsion.

Galvani did not understand this; but he was engrossed with the idea of pursuing the new fact which he had unexpectedly witnessed, and of following its investigation by whatever path might be open to him. So it happened that he was led, in his third set of experiments, to a result of far greater importance, and, notwithstanding that the two former series had nothing to do with this result, so far as the nature of their phenomena were concerned, they were still the necessary and perfectly natural preliminaries to its discovery.

Galvani knew that the violent disturbances of thunder and lightning were not the only ones which take place in the atmosphere, but there were also other changes of electrical condition going on more quietly in ordinary weather. "After having tested," he says, "the action of atmospheric electricity in thunder-storm, I was exceedingly desirous of investigating it in its daily condition of quietude and serenity." For this purpose he hung his freshly dissected frogs, by copper hooks attached to the spinal column, from the iron railing of a balustrade about his house, and left them there exposed to the sky. He thought that, perhaps, imperceptible exchange of electricity between the clouds and the atmosphere might be betrayed by some movement in the frogs' limbs, and he watched patiently with that object for several days. But there was not the least indication of muscular excitement. At last, seeing that nothing further would come of the experiment in that way, he shifted the position of the limbs, and pressed them, still hanging by their hooks, against the iron framework of the balustrade, and instantly a convulsion took place. He had made a galvanic circuit. The copper hook and the iron railing were the two metals of the battery; and by bringing the muscles in contact with the railing, he had completed the communication, and had seen, for the first time, a muscular contraction excited by the galvanic current.

But, of course, his knowledge of the real cause of the contraction was still very incomplete, and no one could be more conscious of this than himself. He knew how many sources of error there may be in drawing a conclusion from visible facts, until they have been examined from every direction. His most natural inference, if he remained satisfied with this experiment, would have been, that the electrical cause of the contraction came from the atmosphere. "I was very much inclined," he says, "to attribute these contractions to atmospheric electricity, which had accumulated in the frog, and was then suddenly discharged by the contact of the hooks and railings, never having seen contractions produced in this way except in the open air, as I had not yet tried them in any other place; we may be so easily misled into thinking that we have really seen whatever we hope or expect to see." But he soon found that he could obtain the same results in his closed laboratory as in the open air, at any time of the day, in any weather, and under a great variety of conditions; provided only that communication was made between the nerves and muscles by metallic conductors, with no intervening non-conducting material. The best arrangement was that in which the nerves were suspended by copper hooks or armed with tin-foil, while the denuded feet of the frog rested on a silver plate, and the two were then connected by a metallic arc. The human body, being also a conductor, might be interposed between the ends of the arc without lessening the result. Galvani's description of this part of the discovery is an interesting episode, as it corroborates his proof of the electric nature of the force in operation. He found that if he held the frog suspended by its copper hook in one hand, and touched the silver plate with a metallic rod in the other, the frog was convulsed.

Then he called in the assistance of a colleague. "I was staying," he says, "at the country house of the most noble and excellent Signor James Zambeccari, where Signor Rialpo, of Spain, formerly a member of the Society of Jesus, and a very learned man, was visiting at the same time. He had already kindly aided me in former experiments, and I begged him to do so again in this instance. He accordingly took my place in holding the frog, while, partly for convenience, and partly to vary the conditions of the experiments, I, myself, touched the silver plate with my metallic rod. But, contrary to expectation, no movement was produced."

Then the two observers joined hands, and, on repeating the metallic contact, found, "to their delight," that communication took place through the human electric chain, and was manifested by muscular contraction in the frog's legs. From all these results, the conclusion became irresistible that the convulsions, previously observed in the frogs attached to the iron railings, were due to the contact of their metallic supports.

It is perfectly evident that this third set of experiments contains the substance of a new discovery, and Galvani fully recognized the fact. In the two former

series there were external sources of electricity, either in the electrical machine or in the thunder-clouds of the atmosphere; but here all such conditions were excluded—there was nothing to explain the phenomena but the frog's nerves and muscles and the metallic conductors between them. In all Galvani's experiments, his mind was forcibly impressed by this fact; and he was naturally led to suspect that the electricity which caused the convulsions might be derived from the animal body itself.

He made many attempts to determine which of the two kinds of electricity was produced in the nerves and which in the muscles, thinking one of these tissues would naturally be positive and the other negative; but he finally considered the electricity to be distributed on the exterior and in the interior of the muscles, very much as it is on the outer and inner surfaces of a Leyden-jar. The nerve, with its ramifications, leading from the interior of the muscles, he regarded as analogous to the chain and knob of the Leyden-jar; and when it was connected by a metallic arc with the exterior of the muscle, the animal electric battery was discharged, and a convulsion ensued from the stimulus of the shock.

In this way Galvani accounted for the phenomena witnessed in his experiments. He was far from believing that he fully understood all their relations, but he was convinced of their importance, and had no doubt that their obscurities would disappear on further investigation. He especially noticed the advantage of uniting in the armature of the limbs or in the connecting arc different metallic substances. "There is an additional peculiarity," he says, "which deserves attention, and which I have very often observed, in regard to the connecting arcs, namely, that they are vastly more efficient when composed of different metallic substances than when consisting of one and the same metal." But he does not undertake to explain this peculiarity, although he found that, of various metallic combinations, some were more effective than others.

He was perfectly clear as to the prime importance of what he had actually discovered and the secondary value of what was only inferential, and this distinction is expressly stated in his opening chapter. "From all these particulars," he says, "investigated and established by a long series of experiments, we have not only shown that these contractions are due to electricity, but have also been able to indicate certain conditions and laws by which they are regulated. . . . We have also appended to the narrative a number of corollaries, together with some additional conjectures and hypotheses, mainly in the hope of opening the way for further experiments, by which we may at least be enabled to approximate the truth, even if we cannot expect to reach it altogether."

There are some curious surmises in Galvani's book as to the possible future value of his discoveries in the treatment and cure of nervous disease. He recognizes the difficulty of their application to pathology, on his own hypothesis of an animal electricity as the cause of muscular contraction. But they are interesting in connection with the imperfect state of pathological knowledge in his day as compared with the present, and some of his remarks sound almost prophetic. "In regard," he says, "to the cure of paralysis, I see that it is a matter of great uncertainty. For it is not easy to say whether disease be caused by a degeneration of structure in the nerves and brain, or whether it be due to an obstruction of the supposed electrical circuits by the deposit of some non-conducting material."

"But, perhaps," he adds, "the whole thing will some day or other be cleared up by further practice and experience." Galvani did not have to wait long to see a very important advance made in the path which he had opened. One of his contemporaries was Volta, who had already been for fifteen years professor of physics in the University of Pavia, and who was admirably fitted, both by his capacity and his attainments, for treating a new subject with success.

Volta was greatly attracted by the novelty and character of Galvani's experiments. He repeated them, with many extensions and variations; and he not only verified their results, but was enabled to throw a new light on the immediate cause of their phenomena. His first investigations were communicated in the form of two letters to the Royal Society of London, in 1793, under the title "An Account of some Discoveries made by M. Galvani, with Experiments and Observations on them."[1]

In this communication he refers to Galvani's treatise, published two years before, as containing "one of the most splendid and striking discoveries, as well as the germ of others in addition."

Volta naturally approached the subject rather from its physical than its physiological side, and he had a certain mathematical habit of mind that led him to appreciate the value of quantities in such an investigation. He began by determining, in an approximate way, the amount of electrical stimulus capable of producing convulsions in the muscles of the frog.

By using successively smaller and smaller charges from a Leyden-jar, he found that the entire and living frog might be convulsed by electric discharges which would give but very faint sparks, and which would affect only the most delicate of the electrometers then in use. But a recently killed frog, prepared after the method of Galvani, was more sensitive still. In this condition it could be made to contract by an electric discharge fifty or sixty times more feeble, and quite imperceptible with any electrometer unless by aid of the condenser. In this way he exhibited Galvani's frog as a new kind of electrometer or electroscope, of extraordinary sensibility; and he named it accordingly the "animal electrometer." This showed conclusively that in all the experiments with induced electricity, the dissected frog might be convulsed by an electric discharge too feeble to be detected by other means.

Volta then began to investigate the source of electricity in Galvani's third set of experiments, namely, those with the dissected frog and the metallic arc. Galvani, it will be remembered, attributed this electricity to the different condition of the animal tissues, and always made his connection between the nerve on the one hand and the muscles on the other, as he would between the two surfaces of a Leyden-jar.

With the connection made in this way, the effect is really more striking, because the whole of the galvanic current passed through the insulated nerve, and thus produced a corresponding excitement. But Volta found that the two separate elements of nerve and muscle respectively were not essential to the result.

If one metallic armature were placed on the muscle and the other also on the muscle near by, or if they were placed on corresponding muscular parts of the two legs, a contraction ensued on connecting them by the metallic arc. The same thing happened with the nerve. If an armature of silver were placed on one part of the crural nerve above its junction with the muscles, and one of tin-foil at another part of the same nerve still higher up, and connection made between them, the leg was convulsed, notwithstanding that the whole of the muscles, as well as a portion of the nerve, were outside of the electric circuit. This did not correspond with the idea of an animal electric apparatus consisting of the nerve and muscles combined. It was necessary to look elsewhere for the source of the electricity under

[1] Philosophical Transactions of the Royal Society of London, for the year 1793, page 10.

these conditions, and Volta found it in the contact which developed but a minute quantity of electricity, too small to be recognized by any other means at the command of the experimenter; but the dissected frog was an electroscope of such sensibility that it responded to the test, and betrayed the electric discharge by a convulsion.

Volta was in very much the same position for this part of the discovery as Galvani had been in regard to his own earlier observations. He was compelled to recognize its reality and importance without being able to give its explanation. "I confess," he says, "it is not easy to understand how or why the application of dissimilar armatures, that is, of different metals, to two similar parts of the animal, or even to neighboring parts of the same muscle, should disturb the equilibrium of the electric fluid, and drive it from its condition of repose into one of active and continued displacement. But whatever may be the cause of the phenomenon, and whether intelligible or not, it is nevertheless a fact, abundantly established by the experiments already detailed, and further corroborated by those which follow."

For several years Volta continued the study of his subject, and at last found a way of greatly increasing the intensity of the phenomena, by multiplying the number of pairs of his dissimilar metals, so as to form the Voltaic pile. His results were given in 1800, in a letter to the Royal Society,[1] containing a description of his new contrivance.

Each member of the pile consisted of a plate of zinc in contact with a plate of silver. This was covered by a layer of moistened paper or membrane. Then followed a second pair of zinc and silver plates, and so on, alternately; the two metals always recurring in the same order, and each pair being separated from those above and below by moist membranes. With this arrangement the intensity of the action, on connecting the extremities of the pile, was sufficient to cause shocks and muscular contractions in the hands and arms, and to affect the senses of sight, hearing, taste, and touch. Its operation was compared to that of the torpedo and electrical eel, and it received the name of the "artificial electrical organ."

The peculiarity of this discovery was that it introduced into electrical science two new features. Before that time electricity had been obtained only by the combined use of different substances, one of which must be a conductor, the other a non-conductor, as in the frictional machine, the Leyden-jar, and the electrophorus; and when an electrified body was touched by a conductor, the whole of its charge was expended, and it could be electrified again only by receiving a new charge from an extraneous source. But in the electric pile Volta found, to his surprise, a source of electricity in substances all of which were conductors; and, furthermore, a source which seemed inexhaustible, because, however often the two ends of the pile were touched, the same shock was repeated with the same intensity. The inherent force of the pile seemed to urge the electric fluid incessantly forward, returning upon itself in a continuous flow so long as the circuit of conductors remained complete.

Volta attributed this action entirely to the contact of dissimilar metals. This view is plainly expressed in the title of his letter to the Royal Society, and is repeatedly insisted on in the course of the communication. The fluids are moistened membranes, interposed between the metallic pairs, which he regarded only as conductors; and when a saline solution was found to be more efficient than water alone, he thought it was because the salt increased the conducting power of the water.

[1] Philosophical Transactions of the Royal Society of London, for the year 1800, page 403.

In reality, the source of power in the Voltaic pile is the chemical action between the fluid and the metals, one of which is more oxidizable than the other; and for every unit of electric force sent through the circuit, a definite quantity of material undergoes chemical transformation.

The contact of dissimilar metals is not essential to the result, for a current may be produced without it, if we use two different liquids of which one is more decomposable than the other.[1]

Neither the first nor the second explanation of the phenomena observed, was, therefore, entirely right, as we understand it. Volta imagined the metals in his pile to act by contact alone, while they are really consumed by oxidation.

In Galvani's experiment, the connecting arc, where the two metals join, is, as Galvani supposed, a conductor and nothing more; but its different extremities, when applied to the animal tissues, form with them a galvanic battery of a single cell, and thus produce the current which excites their contraction. We now use it, for physiological purposes, in a different way. We place the two metallic plates in a cup of acidulated fluid, and make the returning current pass through the muscles and nerves. But the effect is the same, for the active force of the current is equal in both directions.

The results obtained by these two investigations were distinct from each other, but of almost equal importance. Galvani discovered the electric action on nerves and muscles which bears his name. Volta gave to physical science a new apparatus by which current electricity is transmitted in a continuous circuit. Each investigator was partially at fault in the theoretical explanation of his own discovery. But the value of the discovery has remained, and has even largely increased in the course of a century, notwithstanding the difference in its interpretation. It also appears, from the history of the circumstances, that the second of these discoveries was a consequence of the first; and nothing can show more clearly the unbroken connection of events, in the progress of science, which may sometimes extend to the most unexpected ramifications. It is plain that we should not be to-day in possession of the electric light, were it not for Volta's discovery of current electricity, and Volta produced his electric pile in trying to investigate the contraction of Galvani's frogs.

During the early part of the present century experimenters were busily occupied with galvanic electricity. They studied its action in a great variety of ways, and thus became acquainted with its mode of operation, and able to appreciate its phenomena. They found that when it was transmitted through any portion of a muscle, it produced contraction at the instant of closing the circuit; that afterward, while flowing through the nerve in a uniform current, it was without effect; and that contraction again occurred when the current was discontinued. Even during the passage of the current, any sudden variation in its intensity, either of increase or diminution, would produce the same effect. It was the change in the electrical state of the parts, rather than their actual condition, which operated as a stimulus and provoked the contractions. The direction of the current, the length of nerve included within the circuit, and the frequency of making and breaking the connection, all had a certain influence in the result. Experimenters found themselves provided with a new agent, by which they could investigate nervous action at their leisure, in animals deprived of life, with the nerves and muscles exposed to view, and with far more delicacy and certainty than ever before; and the

[1] Daniell, Introduction to the study of Chemical Philosophy, London, 1843, page 492.

familiarity thus acquired with the operation of the galvanic stimulus, prepared them for its more effective use in future investigations.

The next event of sufficient consequence to form an epoch in the history of nervous physiology was the discovery, in 1822, of the distinction of motor and sensitive properties in the two roots of the spinal nerves. Eleven years before, Charles Bell[1] had made some experiments on the spinal nerve roots of a recently killed rabbit, in which it appeared that mechanical irritation of the anterior roots caused convulsion in the corresponding muscle, while a similar irritation of the posterior roots had no such effect. This, however, was not supposed to show an anatomical separation between the two powers of motion and sensibility, but between those of volition and consciousness, on the one hand, and involuntary nervous action on the other. The ideas of the author on this subject were not accepted by his colleagues. In fact, they were not really published, but only printed in pamphlet form for private distribution. They hardly attracted the notice of the professors, and had no influence on the medical doctrines of the day. Subsequently, in 1821, Bell published[2] the remarkable observation that if the seventh cranial nerve distributed to the face were divided in a living animal, the movements of facial expression were abolished; while the faculty of sensation could be destroyed by cutting the corresponding branches of the fifth pair.

Thus the two main properties of nervous endowment, generally associated with each other, occupied, in this instance, distinct situations; since the seventh was shown to be a nerve of motion only, the sensibility of the face being supplied from another source. This fact was connected, in the researches of Sir Charles Bell, with theoretical considerations of a different bearing; but it had evidently a great importance of its own, and was received on all sides with much interest. It especially attracted the attention of Magendie, then at the height of his activity in physiological investigation. Magendie repeated Bell's experiments on the seventh cranial nerve, and verified their results as to its exclusively motor properties. But he was intent on exploring various other parts of the nervous system; and in 1822 he performed and published his experiments on the spinal nerve roots. His description is a model of directness and simplicity, free from any unwarranted inference or assumption. "I had long been wishing," he says, "to try the experiment of dividing the posterior roots of the spinal nerves, but had never succeeded in doing so, owing to the difficulty of opening the vertebral canal without wounding the spinal cord and inflicting severe or fatal injury upon the animal. But a month ago I received at the laboratory a litter of pups, only six weeks old, and it seemed a good opportunity for another attempt at the operation. This time, in fact, I succeeded, by the aid of a very sharp scalpel, in laying bare, almost at a single stroke, the posterior half of the spinal cord with its membranes. I then had no difficulty, after opening the dura mater, in bringing into view the posterior roots of the lumbar and sacral nerves; and by lifting these roots on the blades of a pair of fine scissors, I was able to divide them on one side without injury to the spinal cord. Not knowing what would be the effect of this operation, I closed the wound by a suture in the integument and kept watch of the animal. At first it looked as if the limb on that side was entirely paralyzed. It was insensible to punctures and to pressure, and also appeared motionless; but soon afterwards I was surprised by seeing it move very distinctly, although it was completely and permanently insensible. After trying a second and a third experiment, with exactly the same result, I began to think it probable that the posterior roots of the spinal nerves might have a function distinct from that of the anterior roots, and more especially devoted to sensibility.

"I next thought of dividing the anterior roots, leaving the posterior roots entire; but that was a thing more easily said than done. There appeared to be no way of getting at the anterior surface of the cord without involving the posterior roots, and at first it seemed a hopeless undertaking. After considering the matter for a day or two, I tried to reach the anterior roots with a sort of narrow-bladed cataract-knife, by passing it in front of the posterior roots, and then turning its cutting edge against the bodies of the vertebræ. This plan failed, owing to unavoidable hæmorrhage from the large veins within the vertebral canal; but while making the attempt, I found that by drawing aside the dura mater, I could catch a glimpse of the anterior roots just where they are about to pass through the investing-sheath. This was enough; and in a few seconds more I had divided as many of them as I wished, on one side only. It may be imagined with what curiosity I awaited the result. It finally came in a perfectly unequivocal form; for the limb, though retaining its sensibility, was completely relaxed and motionless. Finally, not to leave anything undone, I divided both the anterior and posterior roots, causing entire loss of sensibility and motion."

Magendie began his experiments, therefore, by dividing the nerve roots and thus abolishing their functions. In pursuing the subject he tried the effect of their irritation, employing for this purpose both mechanical agents and the stimulus of galvanism. The result of these experiments correspond in general with those obtained by the method of division; that is, galvanization of the anterior roots caused muscular contraction, and that of the posterior roots sensation. There were also certain other phenomena which did not altogether coincide with the doctrine of a complete separation between the two functions, and which were not fully understood until some years later. But Magendie took cognizance of every experimental fact, whether he understood it or not; and his own subsequent researches on "recurrent sensibility" explained many of the irregularities which he at first encountered.

The distinction of properties between the spinal nerve roots was of great importance, because it indicated a general plan of arrangement for the nervous system throughout the body. It immediately became a matter of criticism and verification for the leading physiologists of Europe, and the result was a complete acceptance of Magendie's discovery.

In Germany, John Müller, then Professor of Anatomy and Physiology in the University of Bonn, endeavored to avoid the difficulties of so serious an operation in warm-blooded animals by experimenting on frogs. He examined the spinal nerve roots in these animals, both by the method of section, by mechanical irritation, and by galvanism.[1]

"These experiments," he says, "have been rewarded with the most brilliant success. They are so easy of application, so sure and so decisive, that any investigator may now readily satisfy himself of one of the most important truths in physiology. The phenomena are so regular and satisfactory that, for simplicity and certainty of results, they fully compare with any crucial experiment in the physical sciences. Galvanization of the separated anterior roots at once causes active con-

[1] Idea of a new Anatomy of the Brain; submitted for the observation of his friends, by Charles Bell, F.R.S.E.

[2] Philosophical Transactions of the Royal Society. London, 1821, page 398.

[1] Handbuch der Physiologie des Menschen, Coblenz, 1837. Band I., page 651.

vulsions; that of the posterior roots never gives rise to any sign of spasmodic action."

In this way the distinct endowment of the two kinds of nerve-fibres was experimentally established. Once placed on this footing, pursuit of nervous physiology was greatly increased in efficiency and extent. By applying the galvanic stimulus to a spinal nerve above or below the point of section, its mode of action was determined by the excitability of its motor or sensitive fibres. The same method was employed for the cranial nerves, both externally and at their roots; and every branch of inosculation was scrutinized by the same means. It is hardly possible to overestimate the change thus introduced into the study of the nervous system, and the increased facilities which it supplied for further investigation.

We now come to Marshall Hall's discovery of the reflex action of the spinal cord. Up to this time, the motor and sensitive properties of the nervous system had been understood by physiologists as almost wholly subservient to voluntary motion and conscious sensation. These functions resided in the brain as the organ of intelligence and the source of all spontaneous action. From it the motor nerves transmitted to the muscles the commands of the will, while the sensitive nerves brought to it from without the impressions made on the integument. The spinal cord was part of this apparatus of transmission. Like the spinal nerve roots under the influence of galvanism, its posterior columns were found to be sensitive and its anterior columns excitable, and its complete division at any one point abolished voluntary movements and sensation in the parts below. It was the channel through which the spinal nerves held their connection with the brain.

But Hall observed that, notwithstanding the loss of sensation and volition after removal of the brain, the animal might still be capable of motion in the limbs, provided the spinal cord remained.

Although phenomena of this kind had already been noticed in several instances, they had not been demonstrated with sufficient distinctness to fix the attention of physiologists. Hall's observations were first announced in a communication to the London Zoological Society in 1832. They were further embodied in his *Lectures on the Nervous System and its Diseases*, in 1836, and still more formally presented in his *Memoirs on the Nervous System*, in 1837. Their simplest demonstration was given by him in the following way: In a living and uninjured frog, the signs of sensation and volition are manifested whenever the skin is irritated at any point, since the animal feels the impression and responds to it by a voluntary motion. When the head is cut off, or the spinal cord divided at its upper part, the limbs are paralyzed and sensation is abolished. But if, while the animal is in this condition, one of the feet be pinched, the limb is drawn upward; and the movement may be repeated as often as the irritation is applied. Such a movement is very different from that caused by galvanizing a motor nerve, since the stimulus in this instance is applied to the skin, and the muscles react in consequence. Both skin and muscles must retain their connection with the spinal cord; since, if this connection be cut off, no movement takes place on pinching the foot. Finally, the nerves remaining uninjured, if the spinal cord be broken up, all reaction ceases, and irritation of the skin has no further effect. But does not such a violence destroy the physiological property of the muscles, and in that way prevent their contraction? This doubt is removed by applying a galvanic current to the muscles themselves, when they are at once convulsed, showing that their contractile power is unimpaired.[1]

[1] Lectures on the Nervous System and its Diseases. London, 1836, p. 19.

Thus it is the spinal cord, which acts independently of the brain, is a medium of communication between the integument and the muscles. The stimulus conveyed inward, through the sensitive nerves to the cord, is thence reflected outward through the motor nerves to the muscles. From this circumstance it received its name of "reflex action," and, since it was first studied and demonstrated in the spinal cord, it was generally known as the "reflex action of the spinal cord."

But the same form of activity was afterwards found to be very widely extended in the nervous system. The medulla oblongata has its own centres of reflex action, either directly or indirectly essential to the continuance of life. Wherever there is a ganglionic mass of nervous matter, with motor and sensitive fibres originating from it, there is a similar focus of nervous power, often quite disconnected with consciousness and volition. In a state of absolute insensibility, in a man or animal, a touch upon the cornea will cause closure of the eyelids, irritation of the anus will increase the contraction of the sphincter, and the contact of a solid body with the fauces will excite the movement of deglutition; and in all these instances the reaction disappears when its special nervous centre is destroyed.

Similar facts were soon observed in man in cases of paralysis, and nearly all of the phenomena of convulsive affections were seen to have their origin in some unusual irritation of a nervous centre, or in the morbid exaggeration of its excitability. From that time forward the reflex action of the nervous system entered more or less into the whole study of its normal and diseased conditions.

The next topic of special interest in this connection is the influence of the nervous system on the organs of circulation. The earlier approach to definite knowledge on this subject was a very slow one. It consisted mainly in establishing the fact of contractility in the arteries, and was accomplished by experimental enquiries extending over a long time; from those of Hunter on the arteries of animals in 1793, to those of Kölliker[1] in 1849, on the constriction caused by galvanism in the popliteal and tibial arteries of an amputated human limb. A new epoch in the physiology of the circulation was reached in 1851, when Claude Bernard[2] published the discovery that division of the sympathetic nerve in the neck is followed by enlargement of the head. This effect is so striking and so constant, that when once announced, there was no difficulty in its verification and no doubt as to its reality. Almost immediately after section of the nerve, an increased vascularity becomes visible in the conjunctiva, the mucous membrane of the nostril, lip, tongue, and cheek, and in all parts of the skin on the affected side. It is most distinctly seen in the ear of the white rabbit, because the organ presents a thin expansion of semi-transparent tissue convenient for observation, and because the two ears placed side by side afford a ready criterion of any change in vascularity. In the first report of these experiments the attention of the observer was principally directed to the local increase of temperature which also follows division of the sympathetic, but this was afterward seen to depend on the greater activity of the circulation, which was then recognized as the primary and characteristic result of the operation.

This fact of enlargement of the bloodvessels from division of the sympathetic nerve, at once excited a lively interest among physiologists. Hardly a year had elapsed, when a second observation, equally important

[1] Zeitschrift für Wissenschaftliche Zoologie, Leipzig, 1849, Band I., p. 259.

[2] Comptes Rendus de la Société de Biologie, Paris, Tome Année 1851, p. 163.

with the first, was made almost simultaneously by Brown-Séquard, in Philadelphia,[1] Bernard, in Paris,[2] and Waller, in London;[3] namely, that the condition of the circulation, on that side of the head where the sympathetic has been divided, may be regulated at will by experimental means. Suppose that increased vascularity has been produced by division of the sympathetic in the neck. If the stimulus of galvanism be now applied to the divided nerve beyond its point of section, all the previous results of the operation disappear. The bloodvessels contract, the volume of the circulation diminishes, the local temperature is reduced, and the parts resume their normal color, or even become more pallid than before. When the galvanization is suspended, the former conditions return with all the accompanying phenomena of vascularity, temperature, and redness; and the circulation in the part may be in this way alternately increased and diminished for many successive repetitions of the experiment.

It thus appears that the muscular coat of the arteries, supplied with nerve fibres from the sympathetic, is influenced by them in nearly the same way as the voluntary muscles are controlled by the cerebro-spinal nerves. Division of the sympathetic paralyzes the involuntary muscular fibres, relaxes the arterial walls, and allows a larger quantity of blood to pass through the vessels of the part. Galvanization of the nerve, on the other hand, stimulates the muscular fibres to contraction, narrows the calibre of the vessels, and so reduces the volume of the circulating blood. The knowledge of these facts introduced into the nomenclature of the nervous system a new title. There were evidently nerve fibres which acted upon the bloodvessels to call into operation their contractile power; and the nerves possessing such a function, then known for the first time, naturally received the name of the "vaso-motor nerves."

But, in following out this subject, another observation was soon met with, of very different and unexpected character, namely, that certain nerves, on being stimulated, instead of producing contraction of the bloodvessels, cause their relaxation and thus increase the activity of the circulation. This was first shown by Bernard in the case of the submaxillary gland. This organ is supplied with sympathetic fibres from the superior cervical ganglion and carotid plexus, and with cerebro-spinal fibres from the lingual nerve and the chorda tympani. Galvanization of its sympathetic filaments produces, as in other similar instances, contraction of the bloodvessels and a diminished blood supply. But if the stimulus be applied to the lingual nerve above the situation of the gland, or to the chorda tympani which unites with it, the result is exactly the contrary. The bloodvessels enlarge and the circulation is more active so long as the galvanization continues; and this effect is equally marked if the nerve be divided and galvanized between its point of section and the gland.

A similar influence was found to reside in other parts of the nervous system; and the nerves possessing the power of thus causing vascular enlargement were called "dilator nerves." No sooner was this fact established in a general way, than it served to explain a singular phenomenon which had been noticed many years before, but which had thus far been regarded as exceptional, namely, the influence of the pneumogastric nerve on the action of the heart. As a general rule, if the nerve going to a muscular organ be divided, the muscle is paralyzed, and, if the nerve be stimulated, there is a muscular contraction. As the heart receives filaments from the pneumogastric nerve, we should naturally expect that its action would be diminished by section of this nerve, and increased by its stimulation. But the effect is really the reverse. If the poles of a galvanic apparatus be applied to the pneumogastric nerve in the neck the cardiac pulsations are reduced in frequency, and when the strength of the current is increased to a certain degree they stop altogether. The heart lies quiescent, in a state of relaxation, its movements remaining in abeyance while the galvanization is going on, and when it is suspended they recommence with undiminished energy. The influence exerted in this case is not reflex, but direct in its operation. For if the nerve be divided and galvanized above its point of section, there is no result; but if the stimulus be applied below the section, its retarding action on the heart is at once manifested. Furthermore, the power of this nerve to restrain the cardiac movements, like the motor influence of a spinal nerve, is limited in duration. You cannot permanently arrest the heart, and so kill the animal, by continued galvanization of the pneumogastric. When the galvanization of the nerve has been kept up for a certain time the heart begins to beat again. Its pulsations recur, at first, slowly, afterwards, more frequently, and at last they are restored in full regularity, notwithstanding the continuance of the galvanic current. The nerve has lost its power by expansion, and cannot again manifest its controlling force unless allowed to recover by repose. But the heart is still sensitive to the same influence, and if the electrodes be shifted to the pneumogastric of the opposite side it stops as quickly as before.

It must be admitted, therefore, that the influence of the pneumogastric, whatever it may be, which controls the heart's movements, is transmitted from within outward to the peripheral extremities of the nerve; and that it acts in a positive way. It is the most striking illustration of a kind of action in the nervous system, unlike any of those formerly known, but not the less real for being difficult to understand. This is the so-called "action of arrest;" an influence which passes through a nerve from its nervous centre to a muscle, and by which the muscular contraction is suspended. As often happens in such cases, when the existence of this mode of action was once realized, it appeared that there were other instances of the same thing, which had been overlooked. All the sphincter muscles, though habitually in a state of involuntry contraction, are suddenly relaxed at certain periods, by an influence coming from within. The bloodvessels generally received both kinds of nervous impression, and by the varying preponderance of one or the other, they are alternately made to contract or dilate, with all the accompanying changes of local circulation. In this way it became possible to explain the mechanism of temporary physiological congestion, as in secreting glands, or in the alimentary canal during digestion, and those of longer continuance with increased nutrition, like the growth of the uterus and mammary glands during pregnancy, as well as morbid disturbances of the circulation in disease.

Quite a different line of investigation was inaugurated by Helmholtz, in 1851, for determining the rapidity with which nervous action is transmitted through the motor nerves.[1] The idea of measuring, with any approach to numerical precision, the movement of the intangible nerve-force, through its fibres, would seem at first almost beyond the scope of reality; and yet it was accomplished with satisfactory success and by perfectly genuine experimental methods. It would have been impossible were it not for improvements in the galvanic apparatus and the registering machines, which have

[1] Philadelphia Medical Examiner, 1852, vol. vii., p. 489.

[2] Comptes Rendus de la Société de Biologie, Paris, 1852, Tome iv., p. 168.

[3] Comptes Rendus de l'Académie des Sciences, Paris, 1853, Tome xxxvi., p. 378.

[1] Comptes Rendus de l'Académie des Sciences, Paris, 1851. Tome xxxiii., p. 262.

played so important a part in the more recent investigation of animal physics. The knowledge and use of the induced electric currents we owe to Faraday; and their discovery in 1831, with all the related phenomena of electro-magnetism, magneto-electricity, and the production of instantaneous and rapidly alternating opposite currents, practically revolutionized the use of electricity for medical purposes. It also supplied essential facilities for experiments on the rate of transmission of the nerve-force.

The conditions necessary for such an experiment were twofold. First, an instantaneous induced current, for causing a single muscular spasm; and secondly, an automatic registering apparatus, which should mark the exact time, both of the electric stimulus and of the muscular action. By this means a definite result was obtained. With the electrodes applied to the muscles of a frog's leg, an interval, amounting to the one-hundredth part of a second, appeared between the closure of the circuit and the contraction of the muscle. The muscular contraction, therefore, was not an instantaneous effect, but required a certain time to get under way after the application of the stimulus. This interval was not perceptibly altered on applying the electrodes to the nerve at or near its entrance into the muscular tissue. But if they were applied higher up on the nervous trunk, the delay became longer; and it was increased in subsequent trials, exactly in proportion to the distance between the muscle and the point of the nerve stimulation. It represented, accordingly, the time required for the nerve-force to traverse a given length of nerve fibre; and by repeating the test under various conditions, its rate of movement was fairly determined.

These experiments, first performed on the nerves and muscles of the separated frog's leg, were afterwards extended to those of the living man—the electric stimulus being applied to the skin over the situation of a nerve at different points, and the connection indicated by the swelling of the parts over the muscle. In all the investigations thus far, the nerve was excited by the artificial stimulus of electricity.

Subsequently, Burckhardt[1] simplified the experiment and increased the value of its results by employing, instead of electricity, the natural stimulus of volition. The subject being placed in connection with a proper registering apparatus, the signal for voluntary effort was given by the sound of a bell; and the movement was performed in different instances by different muscles. Under these conditions, the time necessary both for volition and for the mechanism of muscular contraction, would be the same in all cases; but that required for traversing the motor nerve would vary according to the muscle employed. A voluntary impulse, starting from the brain, would arrive at the deltoid muscle after travelling a certain distance, but it would follow a longer route to reach the adductor of the thumb. The distribution of the crural nerve to the quadriceps extensor muscle is comparatively remote from its origin, and that of the sciatic nerve to the dorsal muscles of the foot more distant still.

The difference in the time of muscular contraction, observed in these cases, corresponded with the different lengths of nerve conveying the stimulus; and it gave, for the passage of the voluntary impulse, in man, through the motor nerves, an average rate of twenty-seven metres per second.

A similar contrivance for measuring the transmission of tactile impressions through the sensitive nerves, gave their rate of movement as forty-seven metres per second, showing a greater rapidity of transmission for sensitive impressions than for motor impulses, and by comparing the results of further experiments with the known quantities obtained in this way, a close estimate was reached of the time needed for the operation of the different senses, and even for the cerebral acts of perception and will.

When these observations were made on different persons, there was always a certain amount of variation in the result, the nervous action being in some cases more rapid, in others comparatively slow. This brought within the range of definite physiological experiment a fact first noticed in astronomical observatories, namely, that two observers, both watching for the same event, seldom see and record it at the same time. There is a difference in the quickness with which they receive its impression on the senses, and in each case there is a certain amount of delay, so that in neither the one nor the other is the phenomenon perceived at the time of its actual occurrence. In astronomical operations where extreme accuracy is required, as in transit observations for the determination of longitude, this personal imperfection of the observer needs to be corrected from a previous examination of his habitual error. In the Report of the United States Geographical Surveys for 1877, it is stated by Dr. Kampf that the personal error from this source varies somewhat, in the same individual, from day to day; so that its amount should be ascertained and the proper correction made, for each person, whenever a longitude observation is about to be taken.

There is still another point to be noticed in connection with the modern study of the nervous system, namely, the localization of function in different regions of the brain.

The most striking part of this subject relates to the special centres for motion and sensation in the cerebral convolutions. There are few discoveries which have seemed more at variance with our former convictions than that of the existence of these centres. Both the substance and the surface of the cerebrum had often been subjected to experimental examination, both in the living and the recently killed animal, without showing any signs of muscular reaction; and it was the universal belief among physiologists that none of its parts were directly subservient to any form of motion or sensibility. So industrious and skilful an observer as Longet[1] declared in 1869 that he had "irritated by mechanical means the white substance of the hemispheres in dogs, cats, rabbits, and birds, and had stimulated it by the application of potassa, nitric acid, or the actual cautery, as well as by the passage of electric currents in various directions, without ever bringing into play the involuntary muscular contractility or convulsive movements, and similar applications to the gray substance of the convolutions were equally without effect."

From these failures it seemed hopeless to anticipate any further results from direct exploration of the cerebral substance. The brain was generally considered as so exclusively the organ of intelligence, that it could not be expected to respond to the stimulus of physical agencies. In the extremely condensed and valuable work of Ecker on the *Convolutions of the Brain*, the author says in his preface, that "the accurate observation of patients by their physicians, in connection with careful autopsies, is the only means by which we can ever hope to learn the physiological significance of particular cerebral convolutions." This preface was dated March, 1869; and in 1870, Fritsch and Hitzig[2] discovered, by experiments with galvanism

[1] Die Physiologische Diagnostik der Nervenkrankheiten. Leipzig, 1875, p. 32.

[1] Traité de Physiologie, 3me Edition. Paris, 1869, Tome III., p. 146.

[2] Archive für Anatomie, Physiologie, und Wissenschaftliche Medicin, Leipzig, 1870, p. 300.

on the dog's brain, that there are certain parts of the cerebral convolutions where this stimulus always produces definite and unmistakable movements on the opposite side of the body. The contraction of certain groups of muscles, and consequently particular movements in the trunk or limbs, are connected with the stimulation of particular points of the brain; and where such a point is once found, the corresponding movement may be produced at will by repeating the application of the stimulus. There is plainly, in some way or other, a communication through definite nervous routes from the special centre of motion on the surface of the hemisphere to the motor tract in the medulla and spinal cord, and thence to the muscle which performs the contraction.

In all the animals used for experiment, these special centres are grouped in certain regions, while other extensive portions of the cerebral surface show no such indications; and by comparing their position in different species, aided by observations in human pathology, it appears that in man the motor centres for the body and limbs of the opposite side are mainly located in the anterior and posterior central convolutions, immediately bordering on the fissure of Rolando.

Thus the earlier failures and the more recent success in the discovery of the motor centres are both explained. It is true that a large part of the cerebral surface is inexcitable. You may apply the galvanic electrodes to twenty different points of the convolutions without the least sign of a muscular contraction; but on the twenty-first trial you may strike one of these centres, and then the muscular spasm immediately follows. We are now so well acquainted with their probable location in any particular brain, that we need not lose a great deal of time in finding one of them; but, before the geography of their distribution was known, it is not surprising that experimenters should have overlooked their existence.

The account given by Fritsch and Hitzig of their discoveries was exceedingly well expressed, and bore internal evidence of its faithfulness of description. All the phenomena were fully explained, and the results were stated in such a way that other observers could easily follow in the same direction and test their reality. Some doubt was entertained in various quarters as to the interpretation of the phenomena, and particularly how far the muscular contractions might be due to a diffusion of the galvanic current beyond the limits of its immediate locality; but this doubt was removed after repeating the experiments by a variety of methods, and the existence of the motor centres was corroborated by subsequent discoveries in the minute anatomy of the parts and by observations on the local alteration of structure in cases of hemiplegia. The subject is still so new, and in so active a condition of development, that it can hardly be presented in the form of a complete or well-defined physiological doctrine; but it is evidently a matter of great importance, and is probably receiving, at this time, a larger share of attention than any other single topic relating to the nervous system.

Its latest extension is connected with the centres of *sensation* in the cerebral hemispheres. As some parts of the convoluted surface of the brain are plainly subservient to muscular action, it is natural to infer that the remaining inexcitable portions may have a similar connection with the power of sensibility; and it is asserted by some, with more or less confidence, that the senses of touch, taste, smell, sight, and hearing are separately located in as many different regions of the cerebral cortex. The experimental evidence of these localizations is far from being altogether satisfactory; but in one instance at least it is very striking, and indicates beyond doubt a close relation of visual sensibility with the "angular convolution," on the posterior and lateral part of the cerebral hemisphere. If this convolution be extirpated, the operation is followed by blindness of the opposite eye, without any other perceptible disturbance of either motion or sensibility. As other parts of the same brain surface, of equal or greater extent, may be removed without causing impairment of vision, it is difficult to avoid the conclusion that this region has a special connection with the sense of sight. The exact nature of the connection will doubtless be better understood from further investigation.

The complete history of physiological science for the last hundred years, in regard to the nervous system, can hardly be given in the space of a single lecture. But its most important advances are so connected with each other, that they have a relation very much like that of cause and effect. When a new subject of inquiry is first opened, the progress made is for some time a slow one. There are difficulties in the way, which must be overcome by repeated experiments, by gradual improvement in the apparatus, and by better methods of procedure. The causes of the phenomena are imperfectly understood, and their relation with other observed facts is not immediately apparent. But when the knowledge acquired has reached a certain point, its evidence becomes more rapid. Every addition enlarges the circle of its operations, and enables it to execute them with greater facility, and the results attained by this means are not always those most directly anticipated. One discovery often leads to another by bringing into view incidental facts, which in turn become the sources of new information; and in that way it creates opportunities for future progress, which are sometimes realized in their fullest extent only aften an interval of several generations.

There is no more interesting department of physiological study, at the present day, than that of the vasomotor nervous system. Since it was first practically inaugurated by Bernard, thirty years ago, it has been cultivated by many observers, and has received a wide extension in many directions. It touches on most important points of pathology, as well as the functions of health. The connection between secretion and blood-supply, the mechanism of congestions, the dependence of external disturbances of the circulation on disease of internal parts, the red cheeks of pneumonia, the hectic of pulmonary phthisis, and the existance of nervous centres in the cerebro-spinal system, where these changes are controlled by reflex action, are all made capable of investigation by knowledge which has been derived from this source. But how could their study have been ever attempted unless we were already in possession of the simpler facts of reflex action of the spinal cord, and the different behavior of motor and sensitive nerve fibres? All the variations in the effect produced by electric stimulus of different kinds and intensity, the comparative influence of direct and inverse currents, the exhaustion of nerves by continued stimulation, and their recovery by repose, together with many other similar conditions, were indispensable stages in the progress of discovery, and were the fruit of many intermediate investigations. But each series depended, for the possibility of its existence, on another which had gone before, and they all had their origin, in a continuous line of descent, from the experiments of 1789 in Galvani's laboratory at Bologna.

ORIGINAL ARTICLES.

THE ABORTIVE TREATMENT OF FELON WITH COPAL VARNISH.

BY A. B. ISHAM, M. D.,
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FELON, or whitlow, has brought into practice devices intended to be curative, both professional and

domestic, nearly as numerous as bronchial catarrh. The maxim seems to find application here, that where a great number of agents are vaunted as specifics in a single affection, none have much value. At least, in my experience, the results of the various so-called abortive measures of treatment in felon have been very unsatisfactory. In fact, so utterly worthless had they proved, that I was about to settle down into the old routine method of poulticing and incisions, when one day, about a year ago, I met by chance a burly colored brother in a drug store; one of his hands was enveloped in flannel bandages of enormous dimensions, while his countenance and his groans betokened an intense degree of physical suffering. He volunteered the information that a regular physician to whom he had applied had pronounced him the subject of a deep-seated felon of the palm of the hand, and had proposed an incision through the inflamed tissues. Before submitting to incision, however, he intended to test the virtues of a prescription recommended by a sage of his own race, one who made plane surfaces, or the souls of sinners white, as exigencies demanded. The remedial agent advised was copal varnish. Flannel bandages were to be saturated with this, the affected part enwrapped therein, and dry flannel envelopes externally were to complete the dressing.

Three days thereafter I again saw the same individual carrying a hod. He wore a triumphant expression, and the previously bandaged member was bare, and, to all appearances, normal. He said that within a few hours after the application of the varnish, the pain ceased, and the swelling and heat were rapidly reduced. I made mention of the case to the physician who was reported to have been consulted. He stated that when he saw the hand there was a severe phlegmonous inflammation, that the member was swollen to apparently twice its natural size, and that, in all respects it resembled whitlow of the palm in the acute stage.

Notwithstanding the rather remarkable resolution in this instance, my anticipations from the employment of copal varnish in prospective cases of felon were by no means sanguine. The cogent influences leading to a trial of it, were that it was simple and harmless, and that it would serve to satisfy patients that something was being done for them fully as well as anything else, while it could not be inferior to any plan of treatment in vogue, short of free incision.

Since the observation above detailed, thirteen (13) cases of whitlow have presented to me for treatment. In six of these cases a formation of pus having already occurred, they were not deemed fit for the trial of the varnish, and incision was resorted to. In the other seven cases the varnish was the only agent used. The terminal phalanx of the thumb was the part involved in two; that of the index-finger in five cases. In all there was swelling, redness, heat, and great pain; in one a vivid erysipelatous blush extended over the thumb, wrist, and extensor surface of the forearm; in two cases there was apparently a combination of what is popularly called "run-around," with felon of the flexor digital surface, about and near the point. Perhaps in none was the periosteum involved, though several did not differ from cases I have seen in the acute stage, where necrosis and extrusion of the terminal phalanx subsequently took place. In all the seven cases to which the varnish was applied, there was a rapid subsidence of the inflammatory process and its accompaniments, and by the second or third day, the parts were perfectly normal.

If the varnish upon the dressings become unpleasantly hard by drying, it may be softened by adding fresh material from time to time. Its removal may be easily accomplished when found desirable, by rubbing in lard, and then washing with soap and water. Upon the basis of the good results of this limited experience, I shall yet continue to treat felon, and local acute inflammations of external parts, previous to the formation of pus, with copal varnish. No good could be expected of it, except possibly to relieve pain, after suppuration had ensued, since it is a cardinal axiom in surgery that, where pus is formed, it must have exit.

The rationale of the action of the varnish in such cases demands a consideration of the nature of inflammation, and the composition and properties of copal varnish.

According to the most authoritative observations, the initial process in inflammation consists in a dilatation of the peripheral vessels of the tissues compromised. Previous to this dilatation of capillary vessels, some influence has been transmitted to nervous centres impressive to vital conditions of particular structures, and from these centres the dilating impulse has been reflected through vaso-motor nerves. With dilatation, there is increase in the quantity and rapidity of the blood flow. Soon, however, the arterioles leading to the turgid capillaries undergo a contraction of their calibre. Then the capillary blood current is slowed, and the white globules arrange themselves against the vessel walls. There is a migration of these bodies through the walls, the liquor sanguinis transudes into the tissues, and the red blood disks aggregate in rouleaux in the vessels. Completing the process is an active cell proliferation in the inundated tissues.

Copal varnish is composed principally of copal resin and spirits of turpentine. Turpentine, according to the best information I can obtain, constitutes about three-fourths of the mixture, and to it, chiefly, we would attribute the beneficial action the varnish seems to possess in resolving whitlow. The use of turpentine in the treatment of localized inflammation is by no means new. As a topical application, it has been highly extolled in traumatic erysipelas, in boils and carbuncles, peritonitis, hepatitis, pleuritis, and pneumonitis. Its irritant properties hardly need mention. It is well known that it is rapidly absorbed into the system when brought into contact with the skin. That it has a great affinity for oxygen is also familiar. An instance is reported where a lad was found in an asphyxiated state in a cellar where turpentine was stored, and an examination of the cellar air showed that it had been nearly deprived of its oxygen. As the turpentine is separated from the varnish by absorption and evaporation, the resin contracts and hardens. Three ways are therefore

conceivable whereby copal varnish may promote resolution of local inflammation:

1. *By an irritant action.*—Experiments conducted under the microscope upon the inflamed web or mesentery of the frog, have shown that stasis has been overcome, and a flow established in blocked capillaries subjected to the irritation of dilute caustic soda solution, dilute sulphuric acid, ammonia, croton oil, etc. The ingredient of copal varnish which produces irritation is turpentine. A current restored in such manner, and operated upon by other forces, to be presently noticed, may continue, thereby stopping transudation and the migration of leucocytes. The changed conditions of circulation and pressure, resulting from the inflow of fresh blood, facilitate drainage from the surcharged tissues, reduce the bulk of the inflamed part, and materially conduce to a restoration to the normal state.

2. *By withdrawing oxygen and arresting oxidation.*—The attraction which turpentine manifests for oxygen has already been mentioned. By appropriating oxygen in the tissues, which it readily penetrates, it may modify oxidation processes, check cell proliferation, and liquefy inflammatory products so that they can be taken up by the absorbents, and be carried away for elimination. The power of turpentine to absorb oxygen also suggests that, in yet another way, this may not be by any means the least important of its capabilities. It has been shown that certain parasitic microphytes are present in furuncle and abscess, the origin and course of which are attributed to some special activity of such organisms. The researches of Dumas has established that these microphytes can be destroyed by boracic acid, which deprives them of oxygen. Dr. Loewenberg has recently made practical application of boracic acid in furunculosis, with an arrest of development in one instance from local application. Micrococci are found in the abscesses of felon as well as in those following other inflammations, and they are entitled to the same consideration as respects causation. Their vitality is destroyed by turpentine, by boracic acid, and some other agents, by withdrawing their oxygen. And turpentine has a superiority over other substances of this class as a local application, since it more readily penetrates the tissues, and exerts a wider and stronger action.

3. *By excluding air and by pressure.*—The idea that the atmospheric air, in contact with inflamed surfaces, exercises a deleterious influence, is as old as medicine. The varnish forms a coating impermeable to air, and therefore entirely excludes, from this source, any agency operating to favor inflammatory action. The varnish in drying contracts and exercises pressure. The value of pressure, in modifying and subduing inflammation, is familiar to all. Bandaging and strapping inflamed members are modes of applying pressure of the most common practice. Pressure moderates the supply of blood delivered to the part, while, at the same time, it promotes the removal of waste matters and tends to maintain a steady and continuous stream.

The above conclusions go to indicate that any varnish into which turpentine enters largely would serve as well as the copal. While the turpentine itself is doubtless the most important factor in the resolution, alone employed, it might be inefficient, since the resin, by forming a coating and by the pressure it exercises, may supply essential elements, and without which combination the former might be of slight advantage.

SYMPATHIES OF THE PAROTID GLAND.

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A GREAT deal of interest has been lately manifested in affections of the parotid gland, which induces me to report some cases which came under my observation.

John G., a boy of ten years, was attacked with typhlitis. I need not detail the symptoms; will only say it was a well-marked case of inflammation of the cæcum. After a few days' treatment, the symptoms of inflammation in that region seemed to disappear, and the left parotid gland swelled and went on to suppuration.

When the gland grew better, symptoms of inflammation again appeared in the region of the cæcum; these symptoms again suddenly subsided, and the right parotid inflamed and suppurated. When this parotid became better, symptoms of inflammation again appeared in the region of the cæcum. An abscess was finally formed, which discharged healthy pus, and the boy got well, with evident adhesion of the intestine to the parietes of the abdomen. This boy lived for some years in pretty good health, when from violent exercise—playing base-ball—a rupture was produced, an artificial anus formed, from the effects of which he finally died.

In this case there was no evidence of the formation of pus in the region of the cæcum, until after both parotids had recovered; nor were there at any time symptoms of blood-poisoning.

Being impressed with this case, which seemed to me to be merely transferred irritation from the cæcum to the parotids, I was disposed to refer swellings of the parotid, in cases of typhoid fever, to transferred irritation from the glands of Peyer, but I have never witnessed in cases of typhoid fever anything more than a swelling and tenderness of the parotid.

Within the last year I attended a case of severe atonic dyspepsia, in consultation, in which there was also very much of the nervous element.

The stomach became so intolerant of everything except water, that we determined to let it severely alone, and nourish our patient with nutritive enemata; these were composed of beef-tea, brandy, and tr. opium, and were administered every four to six hours. About the fourth day of this procedure the left parotid became painful, swelled so much that the patient could not separate his jaws more than about half an inch, and the socia parotidis seemed very much like going on to suppuration.

Believing that the inflammation of the parotid was likely excited by transferred irritation from the enemata, and the stomach having become somewhat more tolerant, we ceased the enemata. With the aid of poultices the parotid swelling soon began to subside and get well without any suppuration.

I am well aware that inflammation of the parotid occurs in a number of other diseases, as in influenza, but there is associated an aphthous stomatitis, which is, no doubt, the direct cause of the inflammation of the parotid; such also is the case in small-pox.

Inflammation of the parotid occurs in the plague, but in this disease the whole glandular system is very much affected; and so, too, in its congener, typhus fever, inflammation of the parotid is apt to occur.

That very peculiar disease the "mumps," stamps the parotid as an organ differing from all other glands, especially in its sympathies. The above cases are reported to call attention to the fact that the parotid gland takes on inflammation from other causes than septicæmia and the peculiar poison of mumps.

A PRACTICAL POINT CONCERNING EPISTAXIS.

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FREQUENTLY recurring, but slight, attacks of bleeding from the nose, specially in children, are a familiar experience to all practitioners. Persistent, prolonged, and repeated hæmorrhages, although rarer, are not unusual, and, finally, ones dangerous in their long continuance and from their frequency are occasionally encountered — hæmorrhages that weaken and exsanguinate the patient; hæmorrhages that recur daily—even several times a day, for weeks and months—and in all classes, be it borne in mind, in subjects otherwise to all appearances well, in short, without apparent demonstrable general or local cause. Such cases, specially the former, are not the exception; they constitute the rule in practice; for the infrequency of epistaxis due to extensive traumatic lesion, and the rarity of that due to deuteropathic causes, will be conceded. Too often have they baffled all well-meant and carefully-studied general, often local, measures, for their relief; and hence, probably, the multiplicity of theories and wealth of advice which may be found in the journalistic literature of to-day concerning their treatment.

We are all familiar with the routine. The simple cause, to which I shall call attention, not being, to say the least, generally appreciated, resource is had to the internal administration of hæmostatics (iron, ergot, belladonna, etc.), or the general application to the nares of styptics (by tampons, pledgets, syringe, soluble bougies, etc.), perhaps to both or all means combined; and, as experience proves, often without success, persistence or recurrence being the rule.

A simple and easily made examination of the anterior nares, with a suitable light and speculum, even without the latter in many instances—an examination that needs neither expert hand nor eye—will reveal the cause of the conditions described, as almost invariably lying in a small, seldom extensive, erosion of the mucous membrane of the cartilaginous septum, just above the point of the former's junction with the skin. The term ulcer cannot be correctly applied to the lesion—certainly not in its earlier stages, and as commonly seen; for although there is of necessity some loss of substance, no marked excavation exists except in extreme cases. Catarrhal conditions may or may not coexist; they probably will, but it must be borne in mind that neither erosion nor ulceration are features of simple nasal catarrh. On the contrary, I believe that these erosions are always the result primarily of the direct mechanical irritation or injury caused by the forcible and repeated removal of the slight crusts of inspissated mucus formed, in the first instance by various accidental circumstances at this point (a slight concavity here is no unusual circumstance), the finger being the common instrument. The epithelial covering of the parts thus once disturbed, the subsequent steps of the process follow. Secretion mixed with blood, in greater or less quantity, readily lodges upon this as upon any irregular surface or point in the nasal passage, dries into a hard crust in the respiratory current, is again removed mechanically, and each time bleeding follows, either directly as the result of the tearing away of the crust, from the slightest cause such as blowing the nose, or even spontaneously, its amount varying with the extent and duration of the lesion, and being dependent upon the unusual richness of the blood supply (small arterial branches) of the septum over other parts. The process thus instituted and continued, naturally follows the usual pathological course of any interference with a wound surface, and, unless timely and judicious treatment cut short its course, the constantly deepening erosion, the constantly increasing crust of blood and mucus, both dependent upon the constant mechanical irritation, can lead to but one result, viz., perforation of the septum, an accident by no means as infrequent as is supposed.

If the cause in these cases of recurrent epistaxis be as I have described, and repeated observations have convinced me not only as to its correctness but likewise of its frequency, the futility of all general constitutional measures, and the uselessness of all imperfectly directed local ones for its relief, is apparent. The secret of success lies in the careful, *direct* treatment of the eroded point; with this care even, patience is also necessary. The condition is often an obstinate one to deal with. The reparative process is slow, and relapse is often the rule. The indications will suggest themselves; acute hæmorrhage, either profuse or moderate, is at once controlled, inspection readily showing its origin, and its location permitting as readily of direct compression or of direct styptic treatment. Foremost in the successive steps then stands avoidance of the habit of direct interference and irritation of the eroded point upon the septum, by the patient, in the removal of crusts, for confirmed habit, this will be proven to be, in the majority of cases, and the prevention of the crust formation upon the abraded surface, by the unremitting use of vaseline, or some form of unirritating ointment. The judicious use, not the abuse, of astringent solutions locally, carefully applied, then play their useful role. Copper will be found to be the best; nitrate of silver is, as a rule, to be avoided. Care, patience, and per-

sistence are the only elements now necessary for the attainment of success.

First impressions may seem to stamp the point that I make as trivial, but I feel assured, having so often been practically convinced of its diagnostic and therapeutic worth, that it will commend itself when, attention being directed to it, familiarity has demonstrated, as it must, its importance.

HOSPITAL NOTES.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

A SERIES OF CASES OF ANEURISM.

(Reported by WILLIAM E. HUGHES, M.D., LATE RESIDENT SURGEON.)

THE number of cases of aneurism treated in the University Hospital in a part of 1881—greater than usually falls to the lot of one hospital in the same time—with the various modes of treatment, and the different results obtained, leads to a belief that a report of them may be interesting. The case of ligation of both common carotids (Case IV.), is especially worthy of attention from its extreme rarity.

CASE I. *Popliteal Aneurism.*—Service of Dr. JOHN ASHHURST, Jr. Wm. G., white, miner, æt. sixty-one; admitted December 12, 1880. Twenty years before had been struck with the sharp end of a pick in the popliteal space. The wound healed, and gave him no trouble for nineteen years. About six months before admission, he noticed a pulsating swelling, which gave slight pain, and interfered somewhat with walking. The swelling grew rapidly, until, on his admission, it had attained to the size of a child's head. The tumor was not well defined, the blood evidently being distributed in the tissues of the leg and thigh. Posteriorly there was a pointed prominence over which the skin was reddened, and the temperature increased, resembling very strikingly the pointing of an abscess, and threatening to burst at any moment. The case was such an urgent one, that any attempt to resort to a cutting off of the blood supply to the aneurism was not to be thought of, and only amputation of the leg was practicable, which was done at the lower third of the thigh. The patient died three days afterwards of exhaustion. On examination of the tumor, the blood was found extravasated into the tissues, dissecting up the intermuscular septa for some distance in the thigh, and pushing before it the fibrous tissue, so as to form a sort of sac. In the posterior wall of the popliteal artery was an orifice three-quarters of an inch long by one-eighth of an inch wide, with rounded, smooth edges, out of which the blood had poured. The sciatic nerve pierced the mass of blood clots, while the popliteal vein had been pushed posteriorly and to the inner side. From the appearance of the orifice, it was evident that the original wound to the artery had cicatrized, and afterwards, consequent on some strain or recurrence of inflammation, the cicatrix had given way, permitting the blood to escape.

CASE II. *Popliteal Aneurism.*—Service of Dr. D. HAYES AGNEW. George D. G., German, white, æt. sixty; admitted May 25, 1881. Impossible to get any connected history of his case. He was a laborer, necessarily exposed to much heavy lifting and many severe strains. His account of the aneurism, was that it commenced as a small swelling, in the right popliteal space, about two years before admission into the hospital, at first not giving him much inconvenience. No history of any strain or injury to which it could be traced. He denied having had syphilis. When admitted, the aneurism (in the right popliteal space), was as large as a closed fist, preventing full extension of the leg, and giving rise to much pain and uneasiness. Pressure on the popliteal vein had caused the leg, below the knee, to become swollen and œdematous to a slight extent. The tumor presented all the characteristic signs of aneurism, pulsation, thrill, bruit, etc. For a few weeks the patient was placed at perfect rest on a low diet and full doses of iodide of potassium, but no improvement making itself manifest, it was determined to try digital compression, the femoral artery below the origin of the profunda femoris being selected as the point to be compressed. Pressure controlled the pulsation in the aneurism perfectly, the tumor becoming relaxed and softer, and diminishing perceptibly in size. Digital compression was maintained steadily at night from about 8 P. M. till 8 A. M. Through the day, pressure was made sometimes by a horseshoe tourniquet, and sometimes by means of the finger. Compression was continued four nights and three days. At the end of the fourth night, pulsation had entirely ceased in the sac, which had become much firmer, and pulsation had developed in two of the articular branches about the knee. Digital compression had been maintained in all fifty-two hours; pressure by the tourniquet, thirty-two hours. The patient was placed in bed with the limb in a slightly flexed position. At the end of three weeks, the tumor had diminished much in size, was hard and firm, and there was a complete absence of pulsation and bruit. The patient was discharged cured.

CASE III. *Popliteal Aneurism.*—Service of Dr. AGNEW. George H., colored, gardener, æt. forty; admitted June 1, 1881. Eighteen months before, in jumping from a ditch, he slipped and fell; as he slipped, he felt a severe pain in his left popliteal space, with a sensation as if something had given way. Shortly afterwards he noticed a small swelling, which grew rapidly and steadily, and was attended with pain. He had not had syphilis. On admission, the aneurism (in the left popliteal space), had attained the size of two closed fists, and was attended with pulsation, thrill, and bruit. The leg was partly flexed, and could not be moved. Below the knee it was markedly swollen and œdematous, though pulsation in the arteries of the foot was distinguishable. Pressure by Esmarch's bandage was first resorted to, the bandage being applied from the foot up to the lower edge of the tumor, then from the upper edge of the tumor to the groin. It was kept on an hour, the patient being placed slightly under the influence of ether. At the end of the hour the bandage was removed, when it was found that pulsation was as vigorous as ever. After the failure of this treatment, and owing to a difficulty in obtaining aid in making digital compression, Dr. Agnew determined to ligate the femoral artery at the apex of Scarpa's triangle, the carbolized animal ligature being used. Pulsation and bruit in the tumor ceased, and it became flaccid. The wound at first healed superficially, but in a few days suppuration in the deeper parts became manifest, and it was reopened. The swelling of the leg increased, and marked tenderness developed over the aneurismal tumor. A few days after the operation, pleurisy, with some effusion, developed in the left side, but soon subsided. Sixteen days after the ligation, secondary hæmorrhage occurred from the proximal end of the artery, but was controlled, before much blood had been lost, by ligating the artery in the wound above the seat of the original ligature. After this the swelling in the leg gradually increased, and blebs formed on the great toe. Ten days after the hæmorrhage, pleurisy reappeared in the left side, running on into pneumonia of the left lung, and the patient died about five weeks after the original ligation. No post-mortem examination was made of the aneurism.

(To be concluded.)

MEDICAL PROGRESS.

RESECTION OF THE ANKLE-JOINT FROM THE FRONT.—DR. C. HUETER describes in a recent number of Langenbeck's *Archiv. f. Klin. Chirurg.* a method of excising the ankle-joint, which he has recently practised with success. It was suggested by the consideration that it is from the front that the best view of the joint surfaces can be obtained and the removal of carious foci of bone most readily achieved. The difficulties in the way of such a proceeding are, however, evident, and previous to our recent experience of the successful suture of severed tendons and nerves, they were insuperable. But this experience has enabled Hueter to carry out his desired procedure. He makes a transverse incision from the back of one malleolus to the back of the other, places a double ligature on the anterior tibial artery, and cuts the vessel between, and divides its companion veins and nerves. The tendons of the tibalis anticus and extensor longus pollicis are cut, and that of the extensor communis digitorum drawn aside or cut as may be necessary. The capsule of the joint is then opened from the front, and the diseased surfaces of bone sawn off or gouged out. The real difficulties of the operation now commence. The divided nerves—anterior tibial and musculo-cutaneous—are united by fine sutures through the paraneurotic loose connective tissue. The cut tendons are in the same way joined, not end to end, but overlapping each other, so that the uninjured peri-tendinous tissue around the two ends is in contact. Of course every precaution must be taken to secure primary union of the wound.—*Lancet, Dec.* 17, 1881.

SEPARATION BETWEEN THE PATELLA AND ITS TENDON.—MR. RUSHTON PARKER reports in the *British Medical Journal*, for December 17, 1881, a case of ununited wide separation between the patella and its tendon, in a boy aged twelve years, which was cured by incision and antiseptic suture with copper wire. The patella was firmly attached to its tendon, though one inch higher up than the one on the opposite side, and muscular motion was restored; passive motion was not employed in the treatment.

OVARIOTOMY DURING PREGNANCY.—At the meeting of the Royal Academy of Medicine of Belgium on November 26, Dr. GOLENVAUX related the particulars of two cases of ovariotomy, which he had performed successfully during pregnancy. The two patients were present at the meeting. In the first case the operation was performed in the end of June, 1877, for a right ovarian cyst, the patient being then five and a half months gone with child. In the middle of October an infant was born, which weighed 3235 grammes. In the second case, also, the right ovary was removed, and at about the same period of pregnancy. The operation was performed on the 15th of September last. The patient has since then been very well, and the child gave signs of life about the middle of October. The pregnancy is running the usual course, and everything betokens the probability of a good confinement.—*Lancet, Dec.* 17, 1881.

CLOGGING OF THE INSTRUMENT IN LITHOTRITY.—In the *Maryland Medical Journal*, for January 2, 1882, Dr. ALAN P. SMITH reports an instance in which, after crushing a hard mulberry calculus in the bladder of a man aged sixty-three, it was found that the jaws of the instrument were clogged, and could not be closed, an interval of three-fourths to one inch remaining between the blades. After numerous attempts at closure, the instrument was forcibly withdrawn through the urethra, the bladder washed out, and the patient placed under opium. A good deal of hæmorrhage and pain followed, with ecchymosis, but no urinary infiltration. The patient did well after the first day.

LOCOMOTOR ATAXY FOLLOWING SMALL-POX.—At a general meeting of the Harveian Society of London, Dr. C. G. HENDERSON read the notes of a case of confluent small-pox followed by ataxy. The patient, George A., aged thirty-five, was admitted to the St. Pancras Tent Hospital on May 27, 1881. His temperature, which had ranged between 100° and 102° Fahr., rose suddenly on May 31, reaching in a few hours 107.8° Fahr., and he was then immersed in a bath at a temperature of 68°, for fifteen minutes. His temperature was then 96°, but it rose gradually in the course of the next eighteen hours to 104.4°, and the bath was repeated. No hyperpyrexia or other complication followed, but convalescence was much protracted, large bullæ having formed on the soles of both feet, leaving scabs which separated very slowly. On the 18th of July, when he began to get up, he suffered from numbness and tingling of the feet, legs, and hands; the knee-jerk and ankle-clonus, as well as the skin reflexes, were absent, and he lost his balance when the eyes were closed. No myosis was present. After leaving the Tent Hospital, he attended as an out-patient at University College Hospital. He slowly gained power in his legs, but, when last seen, the knee-jerk was still absent. Dr. Henderson referred to similar cases recorded by Landouzy and others, and considered the lesions causing the patient's symptoms were probably analogous to those found in diphtheritic palsy, and other forms of paralysis noticed after acute diseases. They differed from those of true locomotor ataxy in the more favorable course which they took, ending, in the majority of cases, in recovery.—*British Med. Journ.*, Dec. 24, 1881.

INFLUENCE OF THE CHOROID ON THE ACUTENESS OF VISION.—At the meeting of the *Académie des Sciences*, on December 5, 1881, M. FANO presented a note on this subject. Most physicists and physiologists have only attributed to the choroid the role of absorbing, by its pigment layer, the luminous rays which pass through the retina, in order to prevent their being reflected forward again from the back of the eye. The choroid is generally compared to the black lining usual in optic instruments. M. Fano, however, believes that the choroid has a more important function. Inasmuch as it is essentially a vascular organ, it has for its function the transferring to the retina the greater part of its nutritive elements, the central artery of the retina, and its branches being insufficient to supply so marked a functional activity.—*Gaz. Méd. de Paris*, Dec. 24, 1881.

AN UNUSUAL CASE OF INTESTINAL OBSTRUCTION.—At a recent meeting of the Northumberland and Durham Medical Society, an interesting case of obstruction of the bowels was recorded by Dr. DRUMMOND as having occurred in his hospital practice. The patient, a male, aged fifty-four, was admitted into the Newcastle-on-Tyne Infirmary for constipation, vomiting, and suppression of urine. The first symptoms—constipation, with pain in the right hypochondrium, especially after eating—had been noticed eight weeks before; and, for nearly three weeks, there had been occasional vomiting and complete obstruction. The usual therapeutical manœuvres failing to give relief, and the patient's condition becoming urgent, it was deemed expedient to explore the abdominal cavity; and this Dr. ARNISON, the senior surgeon to the hospital, proceeded to do by abdominal section. An incision was made to expose a mass which could be felt through the abdominal walls, occupying the position of the ascending colon. The

peritoneum covering the mass was livid, and, from its appearance and relations, was taken for intestine and opened. There was found a tubular cavity containing dark, loose blood-clot, of offensive odor; and, contained also within this cavity, at about the position of the hepatic flexure of the colon, was a calculus, of the size and shape of a large nutmeg. The condition of the patient, who was observed to be sinking, and who shortly afterwards died, prevented further exploration. At the post-mortem examination, Dr. Drummond discovered an aneurism of the hepatic artery, which had ruptured its walls, and the contents of which, on becoming diffused, had passed down behind the mesentery, and, pressing upon the ileum a few inches above the cæcum, had thus brought about complete occlusion of the gut. The calculus, a biliary one, was evidently derived either directly from the gall-bladder or from one of the hepatic ducts. A circular space, two and a half inches in diameter, was absorbed on the under surface of the liver, corresponding to the position of the gall-bladder, which, at the post-mortem examination, could not be found. The case, we believe, is almost unique in the annals of abdominal surgery.—*Brit. Med. Journ.*, Dec. 31, 1881.

PORRO'S OPERATION.—A patient, aged thirty-six, nine months pregnant, who had been sixteen hours in labor, was admitted to Queen Charlotte's Lying-in Hospital, at 10.20 P.M., on December 10. Her lower limbs exhibited extreme rickety deformity, and the conjugate diameter of the brim of the pelvis measured one inch and a half. The os uteri was dilated to the size of a shilling-piece, and the pains were feeble and unfrequent, and the patient's strength not much impaired. After consultation with Dr. Hope, Dr. Percy Boulton, and Dr. Brodie, Dr. Grigg performed Porro's operation, in which he was assisted by Sir W. MacCormac and Dr. Boulton. A living child was extracted. The mother did well up to twenty-four hours after the operation, when she died suddenly. The post-mortem examination by Dr. Allchin revealed incipient peritonitis, but nothing to account for the patient's sudden collapse was discovered, and it was inferred that death resulted from the shock of the operation.—*British Med. Journ.*, Dec. 17, 1881.

NERVE PROSTRATION AND HYSTERIA CONNECTED WITH UTERINE DISEASE.—In the *Lancet*, for May 28 and June 11, Dr. W. S. PLAYFAIR reported four remarkable cases of neurasthemia, growing out of old-standing uterine disease, entirely cured by the systematic treatment, brought under the notice of the profession by Dr. S. Weir Mitchell, in his brochure on "Fat and Blood." In the number of the same journal for December 10, 1881, he states that in the past six months he has had many opportunities of carefully studying this subject with the result of giving him daily increasing confidence in Dr. Mitchell's method as an invaluable aid in managing such classes of disease.

TREATMENT OF DETACHMENT OF THE RETINA BY GALVANO-PUNCTURE.—Detachment of the retina, according to Dr. ABADIE, is most frequently dependent upon a local cause, as it occurs ordinarily suddenly in cases of myopia associated with no diathesis whatever. It can therefore be treated by purely surgical means.

Clinical observation, pathological anatomy, and experiments on animals show that the retina forms adhesions to the choroid wherever there are areas of spontaneous or provoked choroido-retinitis; if, therefore, such adhesion can be produced artificially, it can be hoped that the retina will be fixed to the underlying membranes. In order to produce this result, Dr. Abadie punctures the sclerotic and choroid with a delicate platinum knife, heated by the galvanic current, as far behind the ciliary region as possible. The ocular membranes being thus perforated, the sub-retinal fluid escapes, and an adhesive inflammation is produced which maintains the retina in place. This method of treatment has been employed in eight different cases: in six instances of extensive old separation only slight benefit was produced, but in two cases, where the detachment was limited, most satisfactory results followed. In no case was the reaction too violent, or have any unpleasant consequences occurred.

Struck by the considerable reduction of interocular tension which remains after galvano-puncture of the eye, Dr. Abadie has made use of this method of treatment, with the happiest results, in cases of glaucoma which resist treatment by iridectomy and sclerotomy. —*L'Union Médicale*, Dec. 6, 1881.

EPIDEMIC OF ECTHYMA IN SMALL-POX CASES.—M. RENDU has seen in the Tenon Hospital a number of cases analogous to those recently described by M. du Costel. M. Rendu, however, believes that the eruption is more closely allied to pemphygus than ecthyma. In 1870, during the epidemic of variola, M. Rendu also saw this eruption occur in the cases in St. Antoine Hospital. In some cases the appearance of this complication does not modify the course of the variola; in others, as soon as the ecthyma appears, the temperature rises as much as two degrees or more. The general condition of the patient may be aggravated, and fatal septic accidents may occur from this secondary eruption.—*Bull. Gén. de Thérapeutique*, Dec. 15, 1881.

RELATIONS OF ANGINA PECTORIS TO DIABETES.—At the meeting of the *Académie de Médicine*, held on the 22d of November, M. VERGELY, of Bordeaux, read a paper with the above title, of which the following are the conclusions:

1. The attack of angina pectoris may be associated with diabetes.
2. The attack may be simple, or accompanied by intermittent neuralgias.
3. It can occur independently of any cardiac affection.
4. In attacks of angina pectoris, the urine should always be examined to determine whether the neurosis or neuralgia is not associated with diabetes.—*Bull. Gén. de Thérapeutique*, Dec. 15, 1881.

HOSTILITY TO THE LOCAL USE OF ATROPIA AND DUBOISIA.—In the *Maryland Medical Journal*, for December 15, 1881, Dr. JULIAN J. CHISOLM reports a case of a woman aged seventy, who, after having for a long time systematically made use of atropia after an operation for cataract, suddenly developed a hostility to its action; its use four times being distinctly followed by severe facial erysipelas. A four-grain solution of duboisia was then substituted for the atropia, with the effect of producing decided mental disturbance.

THE MANAGEMENT OF FEVER IN CHILDREN.—The antipyretic treatment of fever in children by cold water, quinine, and salicylic acid, is the subject of some remarks by Dr. FÖRSTER (*Jahrb. f. Kinder*, xvi.) The indication for their employment may be stated to be when danger supervenes from either the height or the duration of the pyrexia. Accurate observations are still wanting on the effect of cold baths, but their therapeutic value is greater than in adults, and their action more intense, since the body-surface is greater in proportion to the body-volume in children. There appears to be considerable difference between rectal and axil-

lary temperatures after cold baths, and a marked fluctuation for some time afterwards. In cases where baths are not applicable, cold packing, sponging, or spraying may be employed; but the effect is not so marked. Quinine and salicylic acid have a more permanent effect than cold water, and should be given to children in doses much larger relatively to their body-weight than is the case in adults. Their use is frequently followed by vomiting; and in those diseases attended by failure of the heart's action, as diphtheria, quinine is to be preferred.—*London Med. Record*, Dec. 15, 1881.

Battey's Operation for Intermenstrual Pain.—An interesting and instructive case is recorded by Fehling in a recent number of the *Archiv für Gynäkologie*. The patient was aged thirty-one, married for eight years, but sterile. Menstruation was painless, but the patient said that she suffered from severe attacks of pain, which came on from fourteen to sixteen days after one menstrual period, and lasted till three days before the beginning of the next. The cervix uteri had been incised and dilated; the uterus had been depleted; the patient had tried one of the bath cures,—but without benefit. She had had an attack of scarlet fever, during which the pain was quite absent. It was thought that the pain was connected with the maturation of Graafian follicles, and therefore spaying was advised; Professor Hegar concurring with Dr. Fehling in this recommendation. The operation was performed in June, 1880, both ovaries being completely removed; and the patient recovered. The ovaries were thought to possess an unusually tough and hard tunica albuginea, and the number of follicles was considered unusually small; but examination, both with the naked eye and the microscope, failed to detect anything else abnormal about them. The patient left the hospital four weeks after the operation, and remained well for six or eight weeks later. Then the pains began to return, and soon became as bad as ever. Hæmorrhage, similar to that of menstruation, also recurred. The patient, therefore, was not benefited by losing her ovaries. We have had occasion to speak strongly on the wrong done to medical science by authors who rush to announce their cases as cures before there has been time to ascertain whether the ultimate result has been beneficial or not. This case shows the necessity for caution before assuming that benefit immediately following extirpation of the ovaries will be permanent. Only in cases which have been watched for a long time can anything be safely said as to whether they have been cured or not.—*Med. Times and Gazette*, Dec. 10, 1881.

Treatment of Phimosis by Dilatation.—In a recent clinical lecture delivered at La Pitié, Prof. Verneuil recommends the treatment of phimosis by dilatation, as first advocated by Nélaton, rather than by circumcision. His mode of operation is very simple. He anæsthetizes the patient, as it is advisable to proceed as slowly as possible, and to obviate the pain inherent to the operation. He draws out the prepuce, and commences by introducing a grooved director between the prepuce and the glans, and then passes a second grooved director along the groove of the first. In this way a commencement of dilatation takes place, and he then introduces a common dressing-forceps, opens it, and withdraws gradually, distending the prepuce just as the anus is dilated by a speculum. Since he has had recourse to this procedure he has never yet met with a failure. All that can happen is a slight rupture of the preputial mucous membrane, giving rise to a few drops of blood. When the prepuce thus dilated is everted, the glans is washed with some carbolized water. If the dilatation has been very considerable, the prepuce can be closed over the glans. If not, there will be a paraphimosis, which should be dressed with lead lotion, without any fear that gangrene of the glans or the penis will be produced by strangulation. Still, gangrene of the glans does occasionally take place, without any satisfactory explanation being possible.—*Med. Times and Gaz.*, Dec. 10, 1881.

Porro's Operation, Successful Result for both Mother and Child.—Werth, in the *Arch. f. Gyn.*, xviii., s. 293; reports this case in which Cæsarean section had been twice before performed on account of a highly contracted pelvis, and in whom he performed Porro's operation without difficulty, and according to Veit's advice, before the commencement of labor. The child was born with left-sided facial paralysis. The pedicle was treated outside of the peritoneum, and the general principles followed which are advised by Hegar (*Ab. f. Gyn.*, 1880, s. 265). In order to prevent septic infection, the pedicle was covered with a thick coating of benzoate of soda, after its raw surface had been superficially charred with the thermocautery, and wiped with a ten-per-cent. solution of chloride of zinc. By this means suppuration was prevented, there was no febrile reaction, and the patient was able to leave her bed five weeks after the operation.—*Centralb. f. d. Med. Wissen*, Dec. 10, 1881.

Boracic Acid in Fetid Sweating.—Dr. George Thin speaks in the highest terms in the *Practitioner*, for December, 1881, of the use of boracic acid in cases of offensive sweating of the feet. He employs a solution of boric acid in glycerin incorporated with a fatty basis of white wax and almond oil; this gives a soft homogeneous cream, free from all irritating crystalline plates and quite permanent.

A New aid to the Diagnosis of Unilateral Disease of the Kidney.—Dr. M. Gluck sends a communication to the *Centralblatt für Chirurgie* for December 10, in which he refers to a new method of discovering in a case in which removal of one kidney seems advisable, whether or not the kidney of the opposite side retains any secreting substance. He proposes that as small an incision as possible shall be made over the kidney to be removed, and that then the ureter shall be sought, and compressed either by a temporary ligature or the application of a pair of forceps. When this is done, some material which is certain to make its appearance rapidly in the urine, such as ferrocyanide of potassium or iodide of soda, is to be injected subcutaneously, and successive drops of urine are to be tested for the presence of the drug by means of a catheter introduced into the bladder. It seems to be suggested that the appearance of the material injected in the secretion of the opposite kidney will be a justification to proceed with the operation, though we must confess to certain misgivings on this head. We can conceive a very imperfect kidney—that is to say, one that would be far from sufficiently healthy to fulfil the whole requirements of the body—which might still secrete enough of the injected material to allow of its being rapidly discovered in the urine; and thus it appears to us that the test might give undue confidence to the operator. If, after a sufficient time has been allowed to elapse, the urine from the presumably unaffected side gives no reaction, it is advised to release the ureter of the diseased side, and test the urine coming from it. The writer adds that the experiment could not be made in cases where, owing to anatomical complications, the ureter of the affected kidney could not be reached, and that it would prove delusive if there happened to be a horse-shoe kidney, the existence of which would, of course, seri-

ously interfere with the diagnosis under any circumstances.—*Med. Times and Gaz.*, Dec. 17, 1881.

RÖTHELN.—Dr. C. M. JONES describes a number of cases of this disease, and gives an excellent table in which the clinical history and symptoms of rötheln and measles are contrasted. He believes that it should be regarded as a specific exanthem:

1. Because of its contagious reproduction of itself.
2. Because it does not afford immunity from any other disease, nor does any other disease afford immunity from it.
3. Because of the pecularities of the eruption.
4. Because of the pecularities of the temperature.
5. Because of the absence of desquamation.
6. Because of the absence of sequelæ.—*Boston Med. and Surg. Journ.*, Dec. 29, 1881.

OPTICO-CILIARY NEUROTOMY AS A SUBSTITUTE FOR ENEUCLEATION.—Dr. JOSEPH A. WHITE objects to the method of optico-ciliary neurotomy generally recommended for the prevention of sympathetic ophthalmia, on account of the difficulty in readjusting the recti muscles when cut and the danger of an oblique muscle being unintentionally divided. His operation, which he has three times successfully employed, is performed as follows: A meridianal incision is made through the conjunctival and subconjunctival tissues from the upper border of the external rectus to the outer border of the superior rectus, thus exposing the sclerotic. A strabismus hook is then inserted under each of these muscles, and with them an assistant pulls the eye down and towards the nose. A small lid elevator is then hooked under the upper lip of the incision and drawn up, thus making a large opening through which the curved scissors can be passed behind the eyeball, and the optic and ciliary nerves cut. Knapp's double hook is then inserted into the posterior part of the sclerotic and, without any trouble, the cut end of the optic nerve and its surroundings are exposed to view at the incision. The sclerotic is then carefully cleaned with the scissors—thus cutting away sections of the optic and ciliary nerves. As long as any blood oozes from the opening, it is kept open. When this ceases, a conjunctival stitch is put in, and cold-water dressing applied.—*Virginia Med. Monthly*, Dec., 1881.

ARTERIO-VENOUS ANEURISM.—In the *Virginia Medical Monthly* for December, 1881, Dr. E. L. KEYES publishes a valuable historical paper on *Arterio-Venous Aneurism*, in which he details a case unsuccessfully operated on by Annandale's operation, the patient dying of septicæmia. Dr. Keyes believes that in a young anæmic case it would be better to use palliative treatment, and not undertake any operation. If, however, an operation is undertaken, amputation should be performed antiseptically if all hæmorrhage cannot be controlled absolutely. He also draws attention to the varying pathological structure of an arterio-venous aneurism.

ALBUMINURIA IN FEBRILE DISEASE.—From an elaborate study of this subject, Dr. EMIL ECKSTEIN concludes that febrile albuminuria is dependent upon a local process in the kidneys, especially in the epithelium, of an inflammatory nature, and that this process is dependent upon an infection of the kidney caused either by the actual passage of parasitic organisms or by the inflammatory action of the poisonous principles in solution. An acute nephritis can also be produced by this infection, and Dr. Eckstein believes that acute infectious nephritis and the febrile affection of the kidney are only different grades of the same process, or, in other words, that the kidney affection dependent upon fever is merely an abortive form of acute infectious nephritis.—*Deutsche Med. Woch.*, Dec. 17, 1881.

THE EFFECTS OF GYMNASTICS.—M. ROUHET has developed in his thesis the researches undertaken in M. Marey's laboratory, on the general influence of gymnastics and muscular effort. Under all forms of muscular exercise, as has been long known, the rhythm of the heart and respiration are accelerated, and the temperature increased. While the cardiac movements are increased there occurs also a dilatation of the peripheral vessels, probably dependent upon the increase of temperature, and as a consequence of the dilatation, there is an increased loss of heat. It is by this means that the animal heat remains within normal limits. The respiration becomes slightly accelerated, but especially changed in rhythm, the amplitude being deeper than before. By these deeper and more frequent respiratory movements there is an increased exhalation of water from the pulmonary surface, and an increased loss of heat through the expired air. In addition, on account of the more marked thoracic aspiration, there is a facilitated and more rapid pulmonary circulation, and, as a consequence, increased gaseous interchange. M. Marey insists that increase in the amplitude of the respiratory movements does not last only during the time of exercise, but that individuals who practice gymnastics regularly have as a consequence a permanent increase in their inspiratory vigor.—*Revue Scientifique*, Dec. 10, 1881.

EXCISION OF THE KNEE IN EARLY LIFE.—From a paper on this subject, Dr. WILLIAM STOKES draws the following conclusions:

1. Excision of the knee should not be looked upon as a last resource, but should be undertaken, if possible, before any profound organic changes take place.
2. Expectant treatment, to be efficient, must be undertaken at an early stage of the disease, and extend over a period of at least two years.
3. No better result than ankylosis can be looked for by this method.
4. In a patient with a predisposition to secondary tuberculous developments, the possibility of the recurrence of the disease after expectant treatment must be borne in mind.
5. In cases attended with prolonged suppuration, the chances of the occurrence of visceral, especially renal disease, must not be lost sight of.
6. Where the skin is unbroken, the disease limited, an efficient method of fixation applied, and a rigid system of antiseptic dressing of the wound adopted, primary union may, in the majority of cases, be anticipated.
7. When these latter conditions are fulfilled, excision of the knee-joint cannot be longer regarded as the formidable procedure it was formerly held to be.
8. The alleged unfavorable results of excision of the knee-joint in early life are opposed to more extended clinical experience.—*Brit. Med. Journ.*, Dec. 10, 1881.

SALIVARY SECRETION FROM CONJUNCTIVAL IRRITATION.—The interesting work of Dr. ASCHENBRANDT proves that all irritating fluids when applied to the conjunctiva, produce a secretion of saliva in carnivorous animals, and he has worked out the complex path of nervous communication. He has also found that atropia inhibits this salivary secretion; that the secretion of the parotid gland is under the control of the glasso-pharyngeal nerve; that the sympathetic is not included in the nerve communication, and that in all instances the secretion is produced by a reflex action.—*Deutsche Med. Wochenschrift*, Dec. 10, 1881.

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SATURDAY, JANUARY 28, 1882.

SMALL-POX.

REPORTS of the spread of this disease continue to appear in the daily press, and the National Board of Health has formally declared it to be epidemic in the United States.

This formal declaration is necessary to permit of the use of the fund set apart by the act making appropriations for the use of the Board during the current fiscal year, as follows: "For aid to local quarantine stations, and for aid to Local and State Boards of Health, to be used in case of epidemics, $100,000."

Probably the reason for the delay on the part of the Board to take this action has been that it has, until quite recently, received no requests from either local or State Boards for pecuniary aid, and that it has not considered it prudent to make available a fund guarded by such a special proviso, until it should have some evidence that it was actually needed.

Now, however, we understand that at least one such demand has been made, and that there is a prospect of others. In our last issue we referred to the desirability of having every emigrant to this country protected by vaccination. At the present moment this is, of course, more necessary for the protection of the emigrants themselves than it is for that of our own citizens, seeing that the disease is already prevalent in those places to which emigrants usually first resort; but the principle is the same in either case. We are glad to learn that the great steamship companies are about to deal with the matter on common-sense business principles, and insist that all emigrants shall be vaccinated at the place where they embark for this country, and thus prevent the delay which would otherwise be required at the quarantine stations on this side.

The result of all this will be that when we have passed through the present epidemic, we shall have a system of protection from another invasion of the disease from abroad; a system by no means perfect, it is true, but still a vast improvement on the "happy-go-lucky" fashion in which we have managed the matter heretofore.

INTERNATIONAL COPYRIGHT.

IN our last we briefly called attention to the condition and prospects of our home medical literature as it has flourished thus far in the absence of international copyright, and we showed that the lack of the stimulus which such a measure is expected to afford had not prevented the satisfactory development of the literature of our science. The fact is that the influence of such legislation upon production of this nature is much less than is popularly supposed. Professional men, unlike professional literateurs, write from many motives, among which that arising from expected pecuniary rewards is frequently, perhaps, the least. Many labor from an honest ambition for fame, or from a sense of duty to their fellows; many others, because a well-written and successful work is one of the surest aids to professional success; others, again, blessed or cursed with the literary temperament, find in composition a congenial employment for the leisure hours, which, during the earlier years, at least, of professional life, are too numerous in the experience of nearly all of us. In a commercial sense, therefore, the supply is not regulated by the demand; and even as the greatest pecuniary offers would not tempt some men to write, so the prospect of unpaid labor will not deter others.

How little, in fact, the commercial spirit has to do with these matters is shown by comparison of the value of literary property in England, whose medical writers, protected by copyright, have virtually no foreign competition to dread, with that of America, where we are constantly assured that native literature cannot flourish in consequence of its exposure to competition with uncopyrighted English work. The fact is that medical writers in America are paid fully as well as, if not better than, their English brethren. A very large proportion of all the medical works which are issued from English presses are published "on commission,"—that is, at the expense and risk of the author; and it is perfectly fair to assume that in a majority of cases the author finds that the returns do not equal the outlay. Publishing "on commission" is far less common in this country. In the case of successful works the receipts of authors here are apt to be larger from the fact that they are usually paid by a "royalty,"

while in England the custom prevails, when books are not issued on commission, of a purchase outright of the copyright by the publisher, in which case the interest of the author ceases, unless he may receive some small payment for the revision of subsequent editions. There can be no doubt that the sums received by the late Dr. Dunglison and by the authors of the *United States Dispensatory* exceed the aggregate paid to the most successful English authors of medical works. As regards journalism, we think that we can assert with safety that the compensation paid by the NEWS for original contributions is fully as large as, if not larger than that paid by any English medical periodical.

We therefore believe that those will be disappointed who look for any very marked improvement in the status of American medical authors, and any very decided stimulus to the development of American medical literature, from the adoption of an international copyright. Nor, on the other hand, do we, for the same reasons, anticipate any very great increase in the prices of medical books from such cause, provided the measure be such as to insure the manufacture of books in this country in the styles and forms which experience has shown to suit our markets. At the same time, there is a principle of equity involved which must render all right-minded men desirous of seeing literary property properly protected and the rights of the author recognized.

As our readers may not be familiar with the existing condition of the question, we may briefly state that for some time past negotiations for a treaty with Great Britain on this subject have been carried on by our minister in London, Mr. Lowell, under instructions from Washington, and it is understood that substantial agreement has been reached upon the principal features of a convention. These negotiations have been delayed, first, by the change of administration last March, and then by the assassination of President Garfield, leading to the recent withdrawal of Mr. Blaine from the State Department. What are the views of the new Secretary, Mr. Frelinghuysen, we are not advised, but it is not likely that he will take a different view of the matter from that of his predecessors. One difficulty, however, in the way of an international copyright convention, is the fact that the Constitution intrusts to Congress exclusively the power of regulating copyright; so that the framing of a convention on this subject is a usurpation of the executive over the legislative department of the government, unconstitutional in itself, and requiring, to give it vitality, legislation by the bodies whose privileges have been overridden, who will thus be indisposed to grant such legislation, and who will be amply justified in refusing to sanction so evil a precedent. Besides this, there is the objection that a treaty is framed for a definite term of years, and is unalterable even though its provisions should be found by either party to be unwise in their details.

To remove these sources of opposition to the measure, a bill, containing nearly the same provisions as the treaty, was introduced in the House of Representatives last winter by the Hon. W. D. Kelley, of Pennsylvania. It is, however, more comprehensive in its scope than the treaty, inasmuch as it enables the authors of all countries which grant reciprocal privileges to American authors, to obtain the advantages of copyright here, and is thus not limited to England. At the meeting of the International Literary Congress, at Vienna, in September last, where International Copyright formed the leading topic of discussion, the view was prominently urged that copyright ought not to be the subject of international conventions, which might be terminated at any moment by war, but that each country should legislate for the benefit of foreign as well as of native authors. This view, which is carried out by Mr. Kelley's measure, was not pressed to action, for the purpose of not interfering with the proposed Anglo-American convention, the success of which was regarded by Congress as more certain than we think it likely to prove. The French and German delegates to the Congress, moreover, were loud in their demands that any convention between the United States and Great Britain should be followed by others with their respective countries. These demands are likewise met by Mr. Kelley's bill, which would place it in the power of all foreign governments to give their citizens the benefit of American copyright.

As in the recent organization of Congress, Mr. Kelley has been placed at the head of the Committee on Ways and Means, and is thus made one of the leaders of the House, there would appear to be a better prospect than ever before of accomplishing some practical legislation on this subject. In this, we would call upon our readers to assist. There is no profession more influential than the medical, when it chooses to make itself heard; and if all its members who feel an interest in this question would correspond with their members of Congress, they could do much to overcome what is really the great obstacle to action—the lack of interest felt in the matter by many members of Congress, and the pressure of business which renders it so difficult to get any measure fairly before the House for discussion.

THE LAW OF INSANITY.

THE act recently introduced into Congress by Mr. Springer, and said to have been drawn by David Dudley Field, is intended to define insanity in criminal cases, occurring within the jurisdiction

of the United States. The ability to distinguish between right and wrong has always been held by lawyers as the proper test of responsibility for those mentally unsound. In the proposed law, that "defect of reason" necessary to constitute irresponsibility, consists, "first, not to know the nature and quality of the act he was doing; or, second, not to know the act was unlawful or wrong." In other words, an imbecile who cannot appreciate the nature of the criminal act he commits, or an insane man who cannot discriminate between right and wrong, are equally held irresponsible before the law. This definition will not be assented to by alienists, who have always maintained that the conception of criminal responsibility by lawyers was much too sweeping, and included an important group of cases which ought to be exempt.

To illustrate—there are those who suffer from delusions of hearing, insane who hear voices, and receive commands from God to do acts in contravention of the laws which they know to be wrong, but which they take a delight in doing, because acting under superior power. According to the terms of the proposed act, such an intellectually insane person would be held amenable. It may be said, however, that such insane are peculiarly dangerous, and that as their existence is a constant menace to society, they should suffer the penalty for their acts. The restraint provided for in the last section, namely, confinement in an asylum, more humanely disposes of such cases. It may be admitted that, in general, the legal test will more surely include the criminal. If any latitude of construction is permitted, the door is open to every loose definition, and the impulse to commit a crime, as in the case of Guiteau, comes to be held as an insane impulse which overthrew the reason. The manner of Guiteau's "inspiration" is very different from those delusions, in which the insane man hears a voice which compels him to obey. Guiteau's "pressure" is the conception which an ignorant lawyer would be likely to form of that kind of delusion which forces some insane to commit terrible crimes. In the case of the really insane, the act follows quickly on hearing the command; the obedience is immediate and unquestioning, because the command is clearly heard and is imperative.

SPONGE-GRAFTING.

A SUBJECT of both practical and pathological interest, to which attention is called in the *Edinburgh Medical Journal* for November, 1881, by Dr. D. H. Hamilton, the accomplished pathologist to the Edinburgh Royal Infirmary, is that of promoting the cicatrization of large ulcers and surgical wounds, by accurately fitting a piece of sponge into the deficiency, which, like a layer of fibrinous lymph or a clot of blood, forms a passive porous agent for the building up of a mass of cicatricial tissue. His method, and the result obtained, will be best understood by the following abstract of the first experiment:

A circular ulcer of the leg, which was five inches in diameter, and from half an inch to three-quarters of an inch deep, and the floor of which was still the seat of a small slough of connective tissue, was filled with one large piece and several small pieces of decalcified and carbolized very fine sponge, over which were retained a bit of protective and lint, soaked in a one-to-twenty solution of carbolic acid in glycerin. As there was marked putrefactive odor at the expiration of forty-eight hours, the wound was irrigated with a one-to-forty carbolic solution, and this was continued throughout the progress of the experiment. On the third day the sponge was found to be adhering to the granulating surface; on the fifth day its interstices were filling with germinal tissue, and its edges seemed to be dissolving as it became infiltrated by the new tissue; and from this time onwards, the reparative material continued to grow into the sponge. As soon as its framework was filled, epithelium spread over it; and, at the expiration of five months from the commencement of the experiment, it had entirely vanished, and there was merely a superficial, healthy, granulating surface, an inch and a half in diameter. Hence, in this case, despite the fact that the wound was in a putrescent condition, the sponge, like a blood-clot, became filled with embryonal tissue and bloodvessels, which grew into it from the edges and bottom of the ulcer, and which ultimately caused the sponge to disappear, leaving an organizing mass, out of which the gap was reconstructed.

In the remaining experiments, which were conducted upon ulcers and the large wound left by the amputation of the female breast, the process of healing was equally slow, and this seems to be the only objection that can be urged against the general adoption of the method. On the other hand, it possesses the great advantage of furnishing a non-contractile cicatrix, so that it may be resorted to for the healing of large deficiencies in which a soft and pliant new tissue is deemed desirable.

The conditions essential to the successful performance of sponge-grafting may be summarized as follows:

First. The sponge should be very fine and porous, and be decalcified by immersion in dilute nitro-hydrochloric acid, the excess of the acid being subsequently removed by washing in solution of potassa, and then be rendered antiseptic by steeping it in a five per cent. solution of carbolic acid.

Secondly. The antiseptic sponge should be made to fit the wound very accurately, and should rise a

little higher than the level of the skin. It should be kept aseptic throughout the treatment, or at any rate until it is entirely replaced by a healthy granulating tissue, by a piece of protective, and a one-to-twenty solution of carbolic acid and glycerin. If at any time there is a distinct putrefactive odor, the wound should be irrigated with a two-and-a-half per cent. solution of carbolic acid.

Thirdly. The wound itself, at the outset, should be in a healthy condition, although the presence of a certain amount of foul slough is not a bar to success, as we have seen in the abstract of the first experiment.

Dr. Hamilton thinks that a solid framework for the formation of new bone after operations for necrosis may be found in charcoal or calcined bone. In view of the startling results obtained by the insertion of sponge amid living tissues, which tend to overthrow the old theory of the pernicious action of all foreign bodies when retained in wounds, the suggestion is worthy of adoption, and we trust that we may soon hear that it has been submitted to practical tests by hospital surgeons.

THE UTILITY OF THE SALICYLATES IN RHEUMATISM.

MUCH discussion, during the month of last December, was had in England as to the real value of the salicyl compounds in acute rheumatism. In the *Lancet* for December 31, 1881, we find a report based on twelve hundred cases of this disease treated in Guy's Hospital by different physicians and by various plans of treatment. Such a large number of cases, treated under precisely the same conditions, offer peculiar advantages for determining the relative value of the different plans of medication. As a result of the analysis, it appears that those patients taking salicylates lose their pains more quickly than those who are not taking this remedy. Out of 350 cases collected by Dr. Fagge who were treated with salicylates, 288 lost their pains within the first nine days of treatment. Of a series of 350 cases collected by Dr. Hood, and treated with salicylates, 247 lost their pains in the same time. Of 350 cases not treated with this remedy, only 141 lost their pains within nine days. It appears, however, that relapses among patients taking salicylates are "vastly increased," and that, although "patients soon lose their pains, they are left feeble and exhausted after the use of this remedy."

Not less important than the pains and the duration of the disease is the question of cardiac complication. The results of the treatment of 1200 cases are given. In the words of the report: "We find that among the 350 patients treated by the salicylates, 241 suffered from heart affection of some kind or other; among the 350 treated without the salicylates, 227 suffered from this complication; of the 500 without salicylates, 273 were affected. The proportion between the two classes is much the same, but what little advantage there is does not lie on the side of the salicylic treatment."

These facts are at variance with the statements of Maclagan, who maintains that the salicyl compounds destroy the *materies morbi* of rheumatism, and thus prevent the cardiac complications.

CONSULTATIONS WITH HOMŒOPATHIC PRACTITIONERS.

AT the last meeting of the British Medical Association, at Ryde, England, in the surgical address by Mr. Jonathan Hutchinson, and in the medical address by Dr. Bristowe, there were scarcely concealed suggestions of the advisability of yielding the position of the medical profession on the matter of consulting with homœopathic practitioners. The effort, although not a concerted one, excited quite a storm of indignation throughout England. It is evident that some of the London consultants would gladly take in the guineas which might come to them by such consultations. The death-blow to such aspirations, and to some other questionable professional practices, has just been given by a resolution passed by the Royal College of Physicians, in which the fellows, members, and licentiates, are informed that they are expected to uphold their principles by discountenancing all those who "trade" on some "special designation." A similar disposition to countenance irregular modes of practice has been observed in some prominent localities on this side of the Atlantic, but the heresy has not, however, gained many advocates in the regular medical profession of this country.

NOCTURNAL INCONTINENCE OF URINE IN CHILDREN.

FEW practitioners escape the care of frequent cases of children's nocturnal incontinence. It is one of the least dangerous, but at the same time one of the most annoying and persistent disorders of childhood, and any help we may get of a practical sort, especially in the way of prevention, will be welcome to our readers. A recent paper read before the Harveian Society, by Dr. Tom Robinson, has two homely hints that are of value, and to which we desire to call attention. "There is no doubt," he says, "that nurses and mothers are frequently to blame for this troublesome vice. Young children ought to be taken out of bed during the night and placed on a chamber, so as to excite their bladders to act." And again, "Fear will frequently prevent young people from rising in the dark to relieve themselves." If we instruct our patients to take up their children when they go to bed themselves, we shall do much, even in quite young children, to arrest the natural

incontinence of infancy. And no parent should allow children to sleep without a dim but sufficient light, not only that they may readily find the chamber, or the water-closet, but that in case of fire or sudden illness darkness may not add its unknown terrors as a hindrance to their seeking aid, or the means of escape. If they sleep at a distance, or in different stories, the halls also should be lighted.

INJURY TO THE EYES CAUSED BY THE ELECTRIC LIGHT.

As evil effects have followed protracted exposure of the eyes to the electric light, this fact should be known to our readers. Dr. Nodier, of Paris, relates that two officers of the French Navy, engaged about the light on a vessel, were compelled to have their eyes turned on the electric arc for two hours, and suffered in consequence serious visual disorders—conjunctivitis, iritis, and retinitis. It seems necessary for those who are compelled to keep their eyes on the point of light, to protect them by colored glasses. A yellow tint, experience has shown, is better than blue or black, for the reason that yellow arrests more perfectly the chemical rays—the violet and beyond.

On the other hand, it is asserted that the electric light is not only free from injurious effect, but it actually prevents the evil results produced by exerting the visual power in an uncertain light. Both propositions are, probably, true; the eyes are injured by keeping them on the electric arc, but benefited by the superior illumination of dark places or objects.

"MATRICULANT."

WE notice in some of our exchanges, and especially in the announcements of some of the medical colleges, the use of the word "matriculant." As the season is upon us for such annual lists, no better time, perhaps, can be found than the present to call attention to the fact that there is no such word in the English language. The proper word is "matriculate," and is derived from the Latin "*matricula*," a register or roll. There is no such verb as *matriculo*, and, therefore, no participial noun as "matriculant."

THE EYE REFLEXES IN ANÆSTHESIA FROM CHLOROFORM.

IT has long been known that the abolition of the conjunctival reflex is a proof of complete insensibility during the inhalation of anæsthetics. M. Berger proposes to utilize this fact in the course of chloroform inhalations, for determining the necessity for giving or withholding the anæsthetic. The first sign indicating the return out of insensibility after the abolition of the conjunctival or corneal reflex, is a fibrillary contraction of the orbicular muscle of the lower lid, which appears on touching the cornea or conjunctiva.

REVIEWS.

THE PREVENTION OF STRICTURE AND OF PROSTATIC OBSTRUCTION. By REGINALD HARRISON, F.R.C.S. 8vo. pp. 28. London: J. & A. Churchill, 1881.

In this little brochure Mr. Harrison reproduces a paper on the *Prevention of Stricture*, which originally appeared in the *Lancet* of May 15, 1880, and couples with it an article on the *Prevention of Prostatic Obstruction*. In reference to the former subject he claims that a large majority of strictures, excepting those caused by injuries to the urethra, are preceded by more or less chronic gonorrhœa or gleet, and that the most frequent seat of gleet corresponds with that of stricture, namely, the subpubic or deeper portion of the urethra. Holding that gleet is an evidence that stricture will form and not that it has already formed, he deprecates the violent, and especially the instrumental, treatment frequently employed, and attributes those cases of persistent and obstinate urethral discharge, which every surgeon continually meets, to the imperfect means hitherto adopted for dealing with the bulbous and membranous portions of chronically-inflamed urethræ. He then describes an apparatus, which he says he has employed in such cases with much benefit, and which consists essentially of a soft catheter and a small Higginson's syringe, by means of which he "douches" or "irrigates" the urethra with medicated solutions. He claims that in this manner chronic urethral discharges are most readily cured, and that thereby stricture is in many cases prevented.

As regards the treatment of prostatic obstruction, he asserts that catheterism should be commenced upon the first indication of the prostate enlarging, and should be employed daily, or even oftener, with a view of keeping open a direct channel to the bladder, or, as he expresses it, of "moulding" the growth so as to prevent interference with the mechanism of micturition.

He gives one case in which—the patient dying from other causes—a post-mortem disclosed the fact that the enlarged middle lobe of the prostate had been grooved or almost bisected, apparently by persistent catheterism.

These views as to the effects of treatment require much stronger confirmatory evidence than is here given before they can be adopted or even be seriously considered by the majority of the profession.

AIDS TO RATIONAL THERAPEUTICS. By J. MILNER FOTHERGILL, M.D., M.R.C.P. 16mo, pp. 121. New York: G. P. Putnam's Sons, 1882.

In the words of the preface, this work is intended to be useful to the student when first called upon to prescribe for patients. It is one of the "Students' Aid Series." These primers are supposed to facilitate the progress of the student; but it may be well questioned if they do not obstruct rather than aid. The present one supposes some considerable acquaintance with the subject of therapeutics, and officiously offers help to those who do not need it. The kind of help is more than questionable; it is scant, superficial, dogmatic, the principles of doubtful authority, and the pharmacology mixed and inconsequential.

The prescriptions are bulky, disagreeable, and complex. The author delights it in polypharmacy. Forgetting that there is usually one central point of disturbance, he seeks by a multiplicity of agents to oppose various symptoms. For example, in debility, he recommends: ℞. Tinct. digitalis, ♏x.; tinct. ferri mur., ♏x.; sp. chloroformi, ♏xx.; inf. quassiæ, ℥i.—Ter in

die. It is difficult to conceive of a more disagreeable mixture, and this quantity, more than two tablespoonfuls, to be given three times a day. Here is another prescription to promote digestion: ℞. Sod. sulphat., ℥ss.; acid. n. mur. dil., ♏vj.; inf. gent., ℥i. This is also to be given before each meal. The following is a tonic pill: ℞. Strychniæ, gr. i.; fer. sulph. exsic., ℥ss.; pulv. pip. nig., ℥i.; pil. al. et myrrh, ℥ij.—Mft. in pil. 36 div. He recommends iron with a mineral purgative, thus: ℞. Mag. sulph, ℈j.; cit. fer. et quiniæ, gr. v.; inf. quassiæ, ℥j.—Ter in die. In "elderly persons something of this kind is to be preferred:" ℞. Amm. carb., gr. iv.; sp. chloroform, ♏xx.; tinct. nuc. vom., ♏x.; inf. cascarillæ, ℥j.—Ter in die. In "chronic dilatation of the heart," he gives the following pill: ℞. Strychniæ, gr. ij.; pulv. digital., ℥ss.; fer. sulph. exsic., ℥ss.; pulv. pip. nig., ℥j.; pil. al. et myrrh, ℥ss.—M. ft. in pil. 60 div.; 1 bis in die. In this pill the patient receives $\frac{1}{15}$-gr. of the alkaloid, strychnia, daily.

The primer is full of these specimens. Those given are quoted literally, the abbreviations being those of the author. In a small space is crowded much ill-directed and unwise pharmacology. The evil done is remote as well as direct. Students fancy they have in such a work the whole science and art of therapeutics, and are delighted with the ease with which diseases are treated. Why labor over ponderous tomes, when, in the delightful pages of Fothergill, the whole matter is comprehended in the dimensions of a primer.

COMMON MIND TROUBLES. By J. MORTIMER-GRANVILLE, M.D., M.R.C.S. Edited, with additions, by an American physician. 12mo, pp. 185. Philadelphia: D. G. Brinton, 1880.

This little work consists of two parts. Part I. treats of "Common Mind Troubles," in chapters devoted to "Failings," "Defects of Memory," "Confusions of Thought," "Hesitation and Errors of Speech," "Low Spirits," "Tempers—Good and Bad," and "Creatures of Circumstances." To these the American editor adds papers on "Mental Languor and Listlessness," and "Morbid Fear." The editor has so successfully imitated the graceful and flowing style of the author, that his contributions read like those of the original work.

In the second part, under the general title—"The Secret of a Clear Head," are papers on "Temperature," "Habit," "Time," "Pleasure," "Self-importance," "Consistency," "Simplicity," and "The Secret of a Clear Head." The editor has made no additions to this part of the work. Some of the essays are concerned with the highest questions of morals, of mental physiology and hygiene, and of sociology, but they are discussed in a lucid, familiar, but dignified style, and may be read with profit by physicians, although intended for general readers. The book is cheaply constructed, the type worn, the paper inferior, but it is nevertheless legible.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 19, 1882.

FORDYCE BARKER, M.D., PRESIDENT, IN THE CHAIR.

After various reports by officers of the Academy had been made and acted upon, the President introduced Dr. S. W. GROSS, of Philadelphia, who proceeded to read the paper of the evening, entitled:

The Influence of Operations upon the Prolongation of Life and Permanent Recovery in Carcinoma of the Breast. (See MEDICAL NEWS, January 21, 1882, page 64.)

Dr. GEO. A. PETERS being called upon by the chair to open the discussion, remarked, that when he began his surgical practice, which now dated back more than thirty years, he was taught that it was hardly worth while to meddle with carcinoma of the breast, for it was sure to return, and that operation rather hastened than retarded death. He had early failed to see the force of that teaching; he had operated many times, and his experience had been much the same as that of Dr. Gross. He could recall at the present time, three cases of successful operation. One was that of a lady between forty-five and fifty years of age, upon whom he had operated for carcinoma some sixteen or eighteen years ago. She was still alive and free from any recurrence of the disease. He had operated as Dr. Gross recommended, removing with the tumor the covering of the pectoral muscle as well as dissecting away some portion of the muscle. The axilla was also opened, and infected glands removed. The second case was that of a young woman, thirty years of age, from whom he removed the entire gland more than ten years ago. The axilla was not opened, as there were no evidences of its contamination. The patient was still alive and enjoyed good health. In the third case, operated on more than ten years ago, the axilla was opened and contaminated glands removed. The covering of the pectoral muscle was also dissected off. The patient was still enjoying good health.

Dr. ROBERT F. WEIR was next called upon by the chair, and responded by saying that he had been much impressed with the great mortality (over 17 per cent.) as recorded by the author of the paper. This was much greater than was common in New York. He had operated some sixty or seventy times, and had had only one death, which was due to erysipelas. Since the advent of Listerism in 1875, we operated more boldly, and, as a result, our patients had fewer relapses than in previous times. He thought operation was to be advocated more as a means of prolonging life than as a means of permanent cure. He cited cases to show that patients might be free from the disease for sixteen or seventeen years, or even more, after which the disease would recur.

Dr. THOMAS E. SATTERTHWAITE remarked that during the past ten years he had collected a number of cases of carcinoma, and had been to some pains to have those patients, still struggling along, called upon at their homes and examined. In June last he had collected 36 cases, many of them being known to physicians present. Of the three forms of cancer of the breast—scirrhous, encephaloid, and colloid—80 per cent. of the cases collected by him were scirrhous. Traumatism, as a cause, was associated in about a third of the cases. About one-half of these, or one-sixth of the whole number, had a hereditary taint of cancer. In New York, the deaths from operation did not amount to 3 per cent., between the time of operation and the eighth day. Of 31 cases of which he had complete records, and had himself made the microscopical examinations, 3 might be classed as cured, which gave a percentage of 10. In these cases there had been immunity from disease, six, seven, and ten years, respectively. In reference to the question as to whether early operation secured better results, he had twice attempted its solution, but was still in doubt. In two of the three cases of cure above alluded to, the operation was done early, four and six months, respectively; but in the third case the operation was performed after an interval of five years. An explanation might be found in the view that in cases where long intervals elapsed before operation, the tumor remained benign for several, or many years and then became malignant.

The PRESIDENT said that some ten or more years ago, when the senior ex-president of the Academy, Dr.

Willard Parker, read a very interesting paper on this subject, he (Dr. Barker) had called attention to an observation he had made, viz., the older the patient at the time of the operation, the less likely or less early would be the disease to return, and *vice versa*.

Dr. LEWIS A. SAYRE remarked that he had been taught, as Dr. Peters had been, that when cancer of the breast was diagnosticated, to let it alone. That operation hastened the death of the patient. That operation was to cancer what hoeing was to a hill of corn; the more it was hoed the better it grew. For twenty or thirty years he had been in the habit of removing all cancerous breasts that came under his treatment, that were not so far advanced as to preclude operation. Since Dr. Atlee, in a paper read before the American Medical Association, about the year 1847, had detailed the beneficial results derived from the internal administrations of arsenic in cancer, it had been his custom to give it in all cases, and he must say the results had been gratifying. Some of his patients operated on over twenty years ago were still alive and in good health.

Dr. FRANK HASTINGS HAMILTON said he regarded the pivotal point of this discussion to be, whether the disease was primarily a local, or a constitutional malady. He had observed that cancer of the breast occurred at a time of life when that organ was going into decay, and especially in those who had never borne children. In this fact there was no evidence of constitutional fault, as all other parts of the body were in good condition. We all know how epithelioma might arise from traumatisms, or long-continued local irritation. In the history of such cases there was a time when the disease was purely local.

Dr. ALFRED C. POST had always been in favor of the removal of cancers of the breast, and his practice had been in accordance with this view. His results had been very satisfactory on the whole. The fact to which the President had called attention he had long observed.

Dr. WILLARD PARKER said he had collected the histories of between four and five hundred cases of cancer of the breast which had come under his own observation, either as patients or in consultation. When he undertook the review of these histories he was of the opinion and taught that cancer of the breast was of hereditary origin. As a result of his tabulations he came upon the conclusion unequivocally that it was not hereditary. He believed traumatism to be the exciting cause in most cases.

Dr. AUSTIN FLINT, Sr., moved that a vote of thanks be tendered to Dr. GROSS by the Academy of Medicine for his valuable paper, which was adopted, and the Academy then adjourned.

MICHIGAN STATE BOARD OF HEALTH.

Stated Quarterly Meeting, January 10, 1882.

The regular quarterly meeting of this Board was held January 10, 1882, in Lansing, the full Board being present.

The SECRETARY presented his quarterly report, showing some of the work in the office during the past quarter. The quarter had been a very busy one, made so, in part, by the numerous outbreaks of diphtheria, scarlet fever, and small-pox in the State, which had required much correspondence and the sending out of many documents. The compilation and issuing of the weekly bulletin of health in the State is now so systematized as not to take as much time as at first. It is published in probably two hundred newspapers in Michigan. In response to a request, fifty-seven health officers of villages have begun to make weekly reports of disease. The Board reaffirmed the demand for these reports from health officers of cities. To each place in the State where diphtheria, scarlet fever, or small-pox was reported present, a letter was written to the health authorities giving full instructions and suggestions how to prevent the spread of the disease. Documents containing elaborate and particular directions have been sent for free distribution throughout the vicinity. Each officer was requested to make a special report on the epidemic under his care, and some of the reports show how, by determined action, to stamp out a contagious disease. As showing the necessity for inspection and disinfection of immigrants, their clothing, baggage, etc., and especially for a system of surveillance to their destinations, a statement was made by the Secretary of the introduction of typhus fever in Benzie County, by Norwegian immigrants. The disease made its appearance over sixty days after the arrival of the immigrants, and spread quite freely (not being reported at the time or treated as a contagious disease by the local authorities), causing many cases of illness, and at least three deaths. The importance of inspection of immigrants at Port Huron, and of keeping those believed to be liable to spread communicable diseases under surveillance until their destination is reached, and then placing them in the watchful care of the local Board of Health, was freely discussed. As this Board has no funds available for such a purpose, the subject was referred to the President, Secretary, and Dr. Lyster, to confer with the National Board of Health, and take such action as is possible.

A report by the Hon. LE ROY PARKER, relative to duties of health officers in verifying diagnoses of contagious diseases, was read and ordered printed in the Annual Report. Mr. Parker reported the following: In Gaines Township, Genessee County, a child of Mr. B——s died of what the doctor called malarial fever, and did not report the case to the board of health, though it seems probable that it was really diphtheria. A neighbor and wife, Mr. and Mrs. B., assisted in preparing the corpse for burial. About the same time a child of Mr. S. died from "sore throat," not reported as "dangerous to the public health," and some of the children of Mr. B. attended the funeral. Soon after, Mrs. B. was taken sick with diphtheria, and in turn 13 out of 14 members of the family had it, and 7 out of 10 children died. The Board of Health promptly isolated this household, but the attending physician's error in diagnosis, or failure to report the first case, was fatal to the hopes of that family. In this connection the Board adopted the following preamble and resolutions:

Whereas, It is often difficult to recognize mild cases of diphtheria, or to distinguish such cases from a simple pharyngitis or laryngitis, and

Whereas, Such mild cases of diphtheria often communicate a dangerous and fatal form of diphtheria,

Resolved, That it is the duty of physicians and householders in reporting diseases dangerous to the public health, and of local health authorities in their efforts to restrict such diseases, in every case to give the public safety the benefit of the doubt.

Resolved, That suspected cases of dangerous diseases should be reported, and precautionary measures should be taken.

Drs. Kellogg and Avery were appointed a special committee to report on the present knowledge of diphtheria, and Dr. Lyster was appointed a special committee to report upon the present knowledge of typhoid fever.

Mr. PARKER reported that persons guilty of removing contagious-disease placards from their houses, could be punished under the law, which made the house in which the contagious disease was, a hospital, if declared so by the Board of Health, and subject to their rules and regulations. All rules and regulations of a Board must

first be published, then penalties may be inflicted for any violations.

Dr. AVERY, as special committee on the subject, made a report relative to the overflowed lands in Gratiot and Clinton Counties, and presented a resolution from the Board of Supervisors of Gratiot County. In accordance with the report, the Board adopted a preamble and resolution as follows:

Whereas, The Board of Supervisors of Gratiot County has passed resolutions asking this State Board of Health to investigate the subject of the sickness caused by the overflow of Maple River, because of the dam at Maple Rapids, and "to advise the removal of said dam as being detrimental to the health of the communities living in the vicinity of said river," therefore,

Resolved, That the Board of Supervisors of Gratiot County be informed that this Board has already had an investigation made, and from the report of such investigation, is convinced that the dam at Maple Rapids causes a nuisance, and advises that in case the owner of said dam will not remove the same, and thus abate the nuisance caused by the overflowing of land along said river, a bill in equity should be filed against the owner of said dam, to compel him to remove the same.

The Secretary was directed to correspond with persons in some cities in the western part of the State, relative to holding a second Sanitary Convention this winter. One will be held at Ann Arbor, February 28, and March 1. These conventions are held in accordance with invitations received from citizens, and under arrangements made by a local committee acting with a committee of this Board.

Dr. HAZLEWOOD reported on the inspection of summer-resort hotels as regards danger from fire, and asked if the present law providing for such inspection was not sufficient. Dr. Baker thought the law should be amended so as to take the inspection duties away from the political officers, and place them among the duties of Local Boards of Health. The question was referred to Mr. Parker, committee on legislation, in the interest of health.

The SECRETARY presented a report of work of local boards of health, showing much good work done during the past season in the restriction of contagious diseases. He read letters showing the action of local boards of health with contagious diseases: one from J. R. Thomas, M.D., Health Officer of Bay City, relative to diphtheria; one from W. G. Elliott, M.D., Health Officer of Pontiac, relative to scarlet fever; and one from Foster Pratt, M.D., Health Officer of Kalamazoo, relative to small-pox.

The SECRETARY also read a résumé of work of other State Boards of Health, and it showed that typhoid fever was very widely prevalent; that small-pox was very prevalent in the northern and northwestern States, and that intermittent fever was present in Connecticut, Massachusetts, and Rhode Island.

The next regular quarterly meeting of the Board will be held April 11, 1882. There will probably be a special meeting of the Board in connection with the Sanitary Convention at Ann Arbor, Feruary 28, and March 1, 1882.

CORRESPONDENCE.

HYPERMETROPIA IN THE PUBLIC-SCHOOL CHILDREN.

To the Editor of THE MEDICAL NEWS:

SIR: Will you kindly allow me to corect an error through your columns on a subject which is of interest to many besides myself, and which, if uncorrected, might lead to an erroneous impression. In the report on *Weak Eyes in the Public Schools of Philadelphia*, just published, Dr. S. D. Risley observes: "In the statistics compiled by Drs. Loring and Derby, of New York City, there was but twenty-seven per cent. of myopia in the highest class. Another marked difference is shown in comparing their tables with those of European observers. All the foreign statistics, except those of Conrad, show, expressed in general terms, a low percentage of emmetropic eyes, and a high percentage of hypermetropia." (p. 11.)

That "*all foreign* statistics, except those of Conrad," do not "show a high percentage of hypermetropia" will be seen from the following list, which a cursory glance over the literature has produced, and which I have no doubt could be extended if there was any occasion for it. The list gives the percentage of hypermetropia found by fifteen foreign observers:

	Per Cent.
Jaeger,	7.6
Cohn,	2.3
Thilenius,	2.9
Erismann,	43.3
Malakoff,	3.0
Cohn,	7.0
Krüger,	17.7
Hoffmann,	26.6
Reuss,	20.5
Ritzmann,	5.7
Gayat,	6.8
Dor,	4.18
Conrad,	11.76
Pflüger,	44.
Becker,	12.

The percentage obtained by Dr. Derby and myself was 13.00 per cent. Out of the above fifteen observers ten get a lower. If we take the average of all the above observers, high and low, it amounts to but 14 per cent. Dr. Risley obtained 74 per cent.

So much for foreign statistics. Not only do the statistics published by Dr. Derby and myself agree in a marked manner with the average of the above European observers in regard to hypermetropia, but they also agree in an equally marked manner with that of the predecessors of Dr. Risley in this line of investigation in this country, to which he alludes in an incidental sort of a way as the "work of several Americans," these being Drs. Williams, Ayres, Webster, Cheatam, Agnew, Matthewson, Prout, Mittendorf, and others.

That the public schools of Philadelphia should contain *six times* as much hypermetropia as do the schools of New York, as determined by half a dozen different examiners at different periods is certainly a curious fact, if it be one, and all the more curious as the same methods were adopted, and the same precautions taken in the compilation made by Dr. Derby and myself, as in that made by Dr. Risley.

Respectfully yours,
EDWARD G. LORING, M.D.

NEW YORK, January 19, 1882.

NEWS ITEMS.

NEW YORK.

(*From our Special Correspondent.*)

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.—An interesting paper was read at the December meeting of this Society by Dr. H. H. Kane, of this city, upon the use of opium as a remedial agent. The early part of his paper was devoted to a sketch of the use of opium as a stimulant by presumably healthy persons, and to illustrate the usual manner of using it, a complete opium-smoking bunk, smokers included, was introduced. While admitting the capacity of the drug

to work mischief, the reader believed that the effects of opium smoking were greatly exaggerated, and by contrast with the effects of alcohol, were, comparatively speaking, slight.

As a remedial agent, notably in cases of tuberculosis and other wasting diseases, the results seemed to be merely temporary, the progress of the disease being checked during the administration of the drug, to resume its activity when the use of the opium was abandoned. Hence its action seemed to be rather in the direction of checking metamorphosis of tissue than that of a true curative agent.

A NEW MEDICAL PUBLICATION.—It is said that a new journal, the first number of which will be issued in February, is to be published in this city, which, if carried out as proposed, cannot fail to be of great interest to the medical public. Its title is the *Illustrated Quarterly of Medicine and Surgery*, and its publisher is E. B. Treat, the same who brought out Dr. Fox's admirable *Photographic Illustrations of Skin Diseases and Cutaneous Syphilis*. Four numbers will be issued during the year, each number to consist of four plates, chromolithographs, autotypes, or fine wood-cuts, illustrative of various diseases in medicine, surgery, and pathological anatomy. Accompanying each plate will be the history of the case depicted, besides short practical articles, illustrated by wood-cuts in the text, from the pens of eminent men in the profession. The editors are two physicians, who are connected as teachers with two prominent New York medical schools.

ENFORCEMENT OF THE MEDICAL LAW.—This work still goes on actively, the Medical Society of the County seeming to be as diligent as ever in the pursuit of "irregular practitioners." One hopeful feature, is that most of them after being prosecuted once, do not feel disposed to try it over, although here and there cases occur, but the censors of the Society watch such persons closely, and rearrest them as soon as sufficient evidence can be obtained. One such case is already on trial, the man Cox (alluded to in a former communication), has been caught illegally practising a second time, notwithstanding his former conviction. The penalty for subsequent offences, the law declares, shall be "a fine of not less than one hundred dollars, nor more than five hundred dollars, or by imprisonment for not less than thirty nor more than ninety days, or both;" and this latter sentence, "or both," *i. e.*, fine and imprisonment, the censors mean to try to secure.

Another salutary feature, in the opinion of the County Society, is the necessity of endorsing diplomas which are issued outside of the State, and this section of the Pennsylvania law, which is objected to by the Philadelphia medical schools, on the ground that "they regard it as offensive and unjust for the faculty of a medical school in this State to sit in judgment on the qualifications of a medical man, attested by the signatures of a faculty in good standing in another State," is here thought to be a wise and good provision.

EDINBURGH.

(*From our Special Correspondent.*)

EDINBURGH UNIVERSITY.—The large number of medical students during the present session is without parallel in the history of the university. In the year 1880 there were 1638 matriculations, or an increase of about 50 over the previous year, or, comparing it with the year 1875, an increase of more than 700. Probably, in no other medical school in the world has so large an attendance ever been recorded. The wide area from which the students are drawn, is also remarkable. During last year Scotland contributed 638, or about 38 per cent.; England, 585, or 35.7 per cent.; Ireland, 30, or 1.8 per cent.; India, 120, or 7.3 per cent.; the colonies, 202, or 12.3 per cent.; and foreign countries, 63, or 3.8 per cent. The number of those who graduated is not so large as might have been anticipated from the number of students; only 35 took the degree of Doctor of Medicine (M.D.), and 133 the double degree of Bachelor of Medicine and Master in Surgery (M.B.C.M.), 4 taking the degree of Bachelor of Medicine (M.B.) alone.

EDINBURGH UNIVERSITY, CHAIR OF NATURAL HISTORY.—This chair, owing to the resignation of Sir Wyville Thomson, who is well known as the leader of the scientific expedition with H.M.S. "Challenger," is at present vacant. Sir Wyville suffered nearly two years ago from an attack of apoplexy, and, although he has sufficiently recovered to be able to superintend the investigations and publications which the voyage of the "Challenger" has entailed, he has not found himself equal to the discharge of his duties as professor of natural history in the university. The emoluments of the chair, which are mainly derived from students' fees, amount to little less than £2500 per annum, and thus constitute it much the wealthiest zoological appointment in Britain. The selection of a successor to Sir Wyville rests with the Crown, and it is understood that the chair has been practically offered to Prof. Huxley, of London, and afterwards to Dr. F. M. Balfour, Fellow of Cambridge University, whose excellent work on *Comparative Embryology* is recognized as the best contribution of recent years to the intricate subject of development. Both, it is stated, have declined to vacate their present posts. The candidates announced are Prof. Young, of Glasgow; Prof. Alleyne Nicholson, of St. Andrews; Prof. Cossar Ewart, of Aberdeen; Prof. Ray Lankester, of University College, London; Prof. Cunningham, of Belfast; Dr. Mackintosh, superintendent of Perth District Asylum and examiner in natural history in the university; and Mr. Geddes, lecturer on zoology in the Edinburgh extramural school. There is, therefore, no lack of able men, and it is to be hoped that the fittest will be chosen. The appointment, it is expected, will be made very soon.

PHILADELPHIA COUNTY MEDICAL SOCIETY.—At the annual meeting, held January 18, the following officers were elected to serve during the ensuing year: President, H. Y. Evans; Vice-Presidents, C. K. Mills, John B. Roberts; Recording Secretary, Henry Leffmann; Reporting Secretary, Frank Woodbury; Corresponding Secretary, H. Augustus Wilson; Assistant Secretary, J. D. Nash; Treasurer, Wm. M. Welch; Librarian, M. O'Hara.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.—At the annual meeting, the following office bearers were elected for the ensuing year: President, S. W. Gross; Vice-Presidents, Jas. Tyson, J. Solis Cohen, F. P. Henry, J. Ewing Mears; Secretary, S. F. Hazelhurst; Treasurer, M. S. French; Recorder, Chas. B. Nancrede; Curator, Carl Seiler.

BALTIMORE MEDICAL ASSOCIATION.—At the annual meeting of this Society, held on the 9th inst., the following officers were elected for the year 1882: President, Dr. Christopher Johnston; Vice-Presidents, Drs. W. F. A. Kemp and T. A. Ashby; Recording Secretary, Dr. Eugene F. Cordell.

HARVARD UNIVERSITY MEDICAL SCHOOL.—The cost of the new building now being erected at the corner of Boylston and Exeter Streets, Boston, for the use of the Medical department, will not be less than $190,000. $83,325 having been expended for the site, there remains

of the money collected for the building about $190,000. Work was begun upon the building early in June last, and it is hoped that the whole building will be ready for occupation by the 1st of January, 1883.

Two scholarships, one of the annual value of $300, and one of $200, will be established in the Medical School, from a part of the bequest of the late Edward M. Barringer, of Schenectady. These scholarships are the first which have been endowed in the Medical School.

The whole number of students in attendance during the year was 251; of these 120 had a literary or scientific degree. There were 85 applicants for the degree of Doctor of Medicine, of whom 25 were rejected.

The fourth year course was composed of a class of 10 students, of whom 5 received hospital appointments, one the ordinary degree of M.D., and four applied for the special degree; but as none of them fulfilled all the requirements, this degree was not awarded.

Nine volumes were added to the Medical Library, making the total number of volumes 2009.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.—At the annual meeting of this Society the following officers were elected to serve during the year 1882. President, Dr. Wm. H. Mays; Vice-Presidents, J. D. Wilson, M.D., and C. E. Blake, M.D., and Recording Secretary, W. H. A. Hodgdon, M.D.

THE SOCIETY OF PHYSICIANS AND SURGEONS OF ALAMEDA COUNTY was organized last October. Prof. S. H. Wythe was chosen President, and Dr. E. S. Barber Recording Secretary. The regular meetings will be held on the first and third Thursdays of every month; at the first meeting of every month papers will be read on some subject pertaining to medicine or surgery, and the second meeting will be devoted to reports of cases and discussions.

A SANITARY CONVENTION, under the auspices of the State Board of Health, will be held on February 28 and March 1 at Ann Arbor, Mich. Manufacturers of, and dealers in, all kinds of sanitary apparatus or appliances are invited to send specimens of their articles for exhibition at the Convention, and certificates of merit will be awarded to such articles as are deemed worthy.

Among the subjects to be presented and discussed are the following: (1) Ventilation; (2) Causes of Insanity; (3) Injuries to Health from Overflowed Lands and from Mill-dams and other Obstructions in Rivers; (4) Water Supply and Disposal of Waste Matter; (5) School Life and Hygiene.

HEALTH IN MICHIGAN.—The weekly Board of Health bulletin states that inflammation of bowels, typhoid fever, pneumonia, diphtheria, cerebro-spinal meningitis, erysipelas, measles, and small-pox increased considerably, and influenza and remittent fever have decreased considerably in area of prevalence.

Small-pox was reported at Bay City, Detroit, Grand Rapids, Marcellus (Cass County), and South Haven. New cases were reported at Grand Rapids, January 15. These five places were reported as having 19 cases from January 7 to January 15.

An epidemic of measles is reported at Albion, Jan. 17.

SMALL-POX.—We learn that during last week there were at New York thirty-nine cases of small-pox, and seven deaths, and at Brooklyn, thirteen. In Hudson County, New Jersey, the disease is thought to be abating, while at Hoboken it is on the increase. At Port Jervis the Board of Health has not succeeded in suppressing the disease; about sixty cases in all have been reported, with seven deaths. At Philadelphia there were twenty-three deaths; Pittsburg, twenty deaths; and at Allegheny nineteen deaths. At Pittsburg fifty-six, and at Allegheny twenty-seven new cases were reported from January 21 to 23. There were reported to the National Board of Health, for the week ending January 21, at Boston, one new case and one death; at New Haven, four new cases; at Wilmington, Del., one death; at Cleveland, Ohio, one death; at East Liverpool, Ohio, twelve new cases; at Dayton, four new cases and one death; at Louisville, four new cases and one death; at St. Louis, fifteen new cases and two deaths; at Richmond, thirty-five new cases and two deaths; at Galveston, seven new cases.

THE PARIS MEDICAL SOCIETIES.—M. Dujardin-Beaumetz has just been elected President of the Société Médical des Hôpitaux; M. Léon Labbé, of the Société de Chirurgie; M. Duroziez, of the Société de Médecine.

DEATH UNDER CHLOROFORM AND ETHER.—The *Lancet* for Dec. 31, 1881, states that a patient in the week before died at the Great Northern Hospital whilst under the influence of a mixture of chloroform and ether, administered preparatory to the removal of the nail of the great toe. The anæsthetic was given on lint, and the operation was completed, when it was discovered that the pulse had ceased, and the patient succumbed in spite of every effort adopted to restore animation.

MEDICINE IN JAPAN.—According to the *Lancet*, December 24, 1881, Japan possesses 159 hospitals, in which the patients are treated on principles recognized by Western nations. Vaccination is performed gratuitously, and is compulsory. Moreover, a sort of Medical Act has been lately passed, by which persons without certificates are prohibited from practising medicine or surgery.

EXECUTION OF CRIMINALS BY ELECTRICITY.—A German exchange suggests the following method of procedure for the execution of criminals by electricity. In a dark chamber hung with black, and lighted by a single torch, there is a statue of Justice, with the balance and sword, and a seat, on which the criminal is fastened, connected with a powerful battery in the statue. No one is to be present but the judge, the jury, and necessary officers. The ceremony commences with the reading of the sentence; this terminated, the judge breaks his bâton and throws it on the scale of the balance, at the same time extinguishing the torch. The scale descends, the circuit is closed, and the criminal thrown into the other world.—*Journ. de Méd. de Paris*, Nov. 26, 1881.

The feasibility of the method has unfortunately been already unintentionally illustrated with the electric-light apparatus. The *British Medical Journal* for December 24, 1881, relates the death, in England, of a laborer, who received a fatal shock from accidentally touching an uninsulated wire which was conducting the current for sixteen Brush lights. A number of serious accidents have also been caused in this country from defective insulation, and we believe, in at least one instance, a fatal result (in Pittsburg) has followed.

RUPTURE OF THE BLADDER.—In the *Lancet* for Dec. 10, 1881, Dr. J. T. Call publishes an account of a remarkable case of rupture of the bladder into the rectum, with no consequent infiltration of the cellular tissue with urine, and in which recovery occurred spontaneously.

DANGER IN ETHER INHALATION.—In the *Nashville Journal of Medicine and Surgery* (Dec. 1880), an accident, which narrowly escaped being very serious, is re-

ported to have occurred while anæsthetizing a patient with ether. A tumor was being removed from the parotid region under carbolic spray, when the flame of the spirit-lamp of the atomizer communicated with the ether and the vapor and clothing of the patient instantly caught fire. Fortunately, the flames were extinguished before any injury was inflicted.

POISONING BY WINSLOW'S SOOTHING SYRUP.—In the *Sanitary News*, December 15, 1881, there is a report of another death of a child eight months old, from the administration of a teaspoonful of "Mrs. Winslow's Soothing Syrup," the symptoms of poisoning by morphia being well marked. Analyses of this dangerous nostrum have shown that each ounce of the syrup contains *one grain* of morphia, so the dose, according to the directions on the bottle, for a child eight months old, contained *one-eighth* of a grain of morphia. It is about time that legal proceedings should prohibit the sale of such dangerous compounds, when advertised as inoffensive.

BACILLUS MALARIÆ.—Dr. C. A. MacMunn states in the *British Medical Journal*, for December 10, 1881, that an examination of a drop of blood taken during a chill, from a patient who had contracted malarial fever in Africa, showed most distinctly the presence of the malarial bacillus.

PASSAGE OF AN ARTIFICIAL TOOTH PLATE.—Dr. Frederick F. Palmer gives an account in the *Lancet* for December 10, 1881, of an instance in which a gold plate with two artificial teeth, and having a sharp projecting hook, was accidentally swallowed, and passed through the alimentary canal without doing any injury, and with an almost entire absence of pain.

EFFECTS OF THE ELECTRIC LIGHT ON THE EYESIGHT.—M. Nodier mentions in the *Revue Scientifique*, December 10, 1881, the instance of two naval officers, who, after some experiments with the electric light, were attacked with quite serious visual troubles; there was marked photophobia, slight conjunctivitis, lacrymation, contraction of the iris, and flying spots in the eyes.

THE MAN WITH THE ELASTIC SKIN.—The *Wiener Med. Wochenschrift* states that a man is now exhibiting in that city a peculiarity highly interesting to medical men. This consists in an enormous and astonishing elasticity of his skin. He is able to raise this in folds from his trunk or limbs to the extent of more than a foot; and as soon as the traction ceases the skin resumes its normal position, neither folds nor depressions being visible. The procedure is entirely painless. When the skin is touched it imparts a sensation as if one had hold of a fine sponge, and as if it were much too large for what it covers. Even the hairy scalp and the skin of the nose and palm of the hand exhibit the peculiarity, but to a less extent than that of the trunk or arm. So delicate is the skin, and especially of the upper extremities, that when it is raised in a fold and held before a light, it is found to be transparent, exhibiting the course of the vessels. The "India-rubber" man is thirty-two years of age, and the peculiarity was first observed in his twenty-first year.—*Med. Times and Gazette*, Dec. 3, 1881.

DOUBLE MONSTROSITY.—Dr. Joseph Stedman reports an interesting case of a double monster, twins united by the chest and belly (thoracopagus), having a cord carrying two arteries and two veins, the ductus venosus entirely wanting, the auricular portions of the heart united into a common cavity, with no right auriculo-ventricular opening in the case of fœtus B, and in consequence the lungs receiving their blood from the aorta through the ductus Botelli. The livers fused into one mass, with an absence of gall bladders, the duodenum opening freely into the abdominal cavity, and the small intestines recommencing again with two large ampullæ, also opening into the abdominal cavity.—*Boston Med. and Surg. Journ.*, Dec. 22, 1881.

PERSONAL.—The Order of the Cross and Collar of Knight Commander of the Crown of Italy has been conferred upon Sir William Mac Cormac by King Humbert, in recognition of his distinguished scientific attainments.

NOTES AND QUERIES.

IS THE RADESYGE SYPHILIS?

DR. MAGELSSEN, of Rushford, Minn., writes us that the "radesyge" is really syphilis, and that form which the French writers call "syphilide tuberculo—serpigineuse," and the Germans "lupus syphilitica." For further information on the subject he refers to *Recueil d' Observations sur les Maladies de la Peau*, par W. Boeck and D. E. Danielssen, 2d livraison, La Radesyge, Christiania, 1860, and *Recherches sur la Syphilis*, par W. Boeck, Christiania, 1862, p. 681.

"THE FUTURE OF INOCULATION."

Our clever contemporary *Punch*, in a late number, gives, as a practical development of Pasteur's recent researches upon inoculation of cultured disease germs, a well-drawn picture of the interior of an apothecary shop, where the following dialogue is taking place:

Customer.—"My nephew is just starting for Sierra Leone, and I thought I could not make him a more useful present than a dose of your best yellow fever. Would you tell me the price, please?"

Chemist.—"Well, ma'am, the germs are so difficult to cultivate in Europe, that I would advise your waiting for the next West-Indian mail, when I am expecting a nice fresh consignment from St. Thomas. Meanwhile we would recommend our half-guinea traveller's assortment of the six commonest zymotics, and could add most of the tropical diseases from stock at five shillings each. We have some nice Asiatic cholera, just ripe, but they are more expensive."

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 17, TO JANUARY 23, 1882.

GARDNER, WM. H., *Captain and Assistant Surgeon.*—Now at St. Augustine, Fla., to proceed to San Antonio, Texas, and report in person to the commanding general, Department of Texas, for assignment to duty.—*S. O. 14, A. G. O., January 19, 1882.*

LA GARDE, L. A., *First Lieutenant and Assistant Surgeon.*—Granted leave of absence for one month, to take effect on arrival of A.-A.-Surgeon Collins at Cantonment, on the North Fork of the Canadian River, Ind. T.—*S. O. 12, Department of the Missouri, January 16, 1882.*

BIRMINGHAM, H. P., *First Lieutenant and Assistant Surgeon.*—Who returned to Ft. Leavenworth, Kans., on 12th instant, from leave of absence, to proceed to Fort Gibson, Ind. T., and report to the commanding officer for duty, relieving A.-A.-Surgeon Collins.—*S. O. 12, c. s., Department of the Missouri.*

MADDOX, THOMAS J. C., *First Lieutenant and Assistant Surgeon.*—Having reported at these Headquarters in compliance with S. O. 2, c. s., A. G. O., will report to the commanding officer, Fort Clark, Texas, for duty.—*S. O. 6, Department of Texas, January 16, 1882.*

WHITEHEAD, W. E., *Captain and Assistant Surgeon.*—Died at Tarrytown, N. Y., on January 15, 1882.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

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ORIGINAL LECTURES.

CARTWRIGHT LECTURES.

ON THE EXPERIMENTAL METHOD IN MEDICAL SCIENCE.

Delivered before the Association of the Alumni of the College of Physicians and Surgeons, New York, January 31, 1882.

BY JOHN C. DALTON, M.D.,

PROFESSOR OF PHYSIOLOGY IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

LECTURE II.

BUFFON AND BONNET, IN THE EIGHTEENTH CENTURY.

MR. PRESIDENT AND GENTLEMEN: I shall ask your attention in this evening's lecture to two remarkable phases of physiological doctrine which once held a conspicuous place in the world of science, namely, Buffon's theory of Organic Molecules, and Bonnet's theory of the Inclusion of Germs. Notwithstanding that both are now so obsolete that, perhaps, the majority of my hearers will hardly recall their meaning, they were formerly considered of sufficient importance to be test questions in the controversies of the period, and they are fair examples of the fluctuating estimate to which such subjects are liable at different times.

It occasionally happens that, in searching the annals of medicine, we find allusions to systems and theories which have so far gone out of vogue that we know them only by name. They are no longer part of our scientific doctrines; and they have so little present value or significance that we seldom spend the time even to weigh their merits or defects—and yet these systems once had their day. They were prominent topics of discussion and interest; and they divided medical opinion between the views of antagonistic parties, or carried with them the scientific world in a temporary enthusiasm of acceptance and admiration. They were often originated by men of learning and ability, and owed much of their success to the superior talent of their authors. They were usually ambitious in design and seductive to the imagination. They claimed to open a wider field of knowledge, and to unlock the secrets of nature by some new formula that should dispense with the older and slower methods of plodding investigation. So long as they held out this prospect, they stimulated the hopes and attracted the interest of all. But after a time it appeared that the anticipations which they excited were not fulfilled, and that their promised results failed of realization. Then the theories themselves began to lose in importance; and, once started on the downward road, they receded more and more rapidly from view, until they passed out of sight, and out of mind. They vanished into the limbo of departed spirits; and if they ever show themselves at the present day, it is only to gratify a momentary curiosity as the relics of thought and opinion in former times. Like unsubstantial shadows, they flit across the pages of a forgotten literature, and the glimpses that we catch of them, here and there, are the only traces of their existence in the history of the past.

One of these phantoms, alive and flourishing a hundred years ago, was Buffon's theory of *Organic Molecules.*

Buffon was a remarkable instance of a man of splendid but temporary reputation. His ability commanded the attention of his contemporaries, and enlisted their interest and co-operation for natural history, as no modern writer had done before. His immediate successors were fond of comparing him with Aristotle and Pliny; and if we take their estimate of his reputation, there have been few men, either in science or literature, who ever acquired so great a popular renown. He was a member of the French Academy, of the Academy of Sciences, of the Royal Societies of London and Edinburgh, and of the Academies of Berlin and Bologna. He was created a Count by Louis XV., and was for forty years superintendent of the Garden of Plants (then the "Garden of the King"), which he more than doubled in extent, and where his statue was erected while he was yet alive. His great work on natural history was received as an authority from the date of its publication; most of the European potentates sent him specimens for his museum, or complimentary messages; strangers from abroad thought it a privilege to see him; and among the visitors at his country house were Thomas Jefferson and the Prince of Prussia.

Notwithstanding this extraordinary success, Buffon's qualities could not secure a lasting reputation. He excited the enthusiasm of his readers by his eloquence and originality, but he did not give them much real instruction. This deficiency was felt, even by his friends. Viege d' Azyr, who pronounced his eulogy in the French Academy, and who calls him "one of the lights of the age, and an ornament to his country," says that he often "compels admiration, without convincing the judgment." According to Moreau, he "supplemented by the brilliancy of his imagination the imperfections of his knowledge," and showed himself "more remarkable for boldness of conception than for precision of ideas." There can be no doubt that he did much, in his own time, to popularize natural history among the educated and influential classes, but it was rather as an intellectual entertainment than a scientific pursuit; and his works are now nearly destitute of value for any purposes of reference or exact information.

It appears that Buffon's style as a writer was one of his principal charms for the readers of that day, and formed a large element in his success. It had a sort of poetic splendor, that would be thought quite inadmissible at present in a scientific work, and sometimes will hardly bear translation without a close approach to puerility; but at the period when he wrote, and in his hands, it magnified his subject, and made an impression upon his readers. He often adopts this lofty tone at the opening of a chapter, and nearly always employs it for descriptive passages. He introduces the horse as "this proud and impetuous animal, the noblest conquest ever made by man, his companion in the fatigues of war and in the glory of combats." "The elephant," he says, "makes the earth tremble beneath his footstep, uproots trees from the soil, and with one thrust of his body will batter down a wall." Buffon took great pains to cultivate and perfect this style. They say he would often repeat aloud certain passages, or get his friends to do so, with himself for an audience, to enjoy the sound of his swelling sentences, and, perhaps, make some improvement in their construction. One of the extracts which he was especially fond of hearing in this way, was his delineation of the feelings of the first man, when just awakened to consciousness and vitality. The newly created being is supposed to be telling his own story, as follows:[1]

[1] Œuvres Complètes de Buffon. Second Edition. Paris, 1819. Tome x., p. 358.

"I well remember that instant of mingled joy and anxiety when I felt for the first time my extraordinary existence. I knew not what I was, where I was, nor whence I came. I opened my eyes. What an overflow of sensation! The daylight, the celestial vault, the green earth, the crystal transparency of the waters, all attracted me, excited me, and gave me an inexpressible sense of enjoyment." And so on for seven or eight consecutive pages.

Another favorite passage was his picture of an Arabian desert, introduced *apropos* of the natural history of the camel.[1]

"Imagine," he says, "a region without verdure or moisture, a blazing sun, the sky always arid, plains of sand and mountains still more parched, where the eye searches in vain for any trace of a living creature; a land lifeless, and, as it were, stripped by the winds; where nothing is to be seen but dead bones, scattered pebbles, and rocks standing or overturned; a barren desert, where the traveller never finds a shady resting-place, where he has no companionship, nor anything to remind him of life in nature; absolute solitude, a thousand times more frightful than that of the forest, since even trees are living beings for the man who is there alone. In these void and measureless regions, more isolated, denuded, and desolate than any other, the empty space seems to enclose him like a tomb. The light of day, more gloomy than the shades of night, returns only to disclose his impotence and destitution. It shows him the horror of his situation by enlarging before his eyes the boundaries of vacancy, and shuts him out from the habitable world by stretching around him an abyss of immensity which he could never hope to cross."

The satisfaction which Buffon felt in these descriptions does not seem to have been in the least diminished by the fact that he had never seen an Arabian desert, and that his story of the first man was entirely imaginary.

Buffon's *Natural History* was a work of very extensive design. It included an explanation of the structure and physical geography of the globe, the nature of man and animals, a general view of animals, vegetables, and minerals, the functions of nutrition and reproduction, an account of the varieties of the human race, and the different species of birds and quadrupeds, with a description of specimens in the Royal Museum.

He had a theory of the planetary system, which was one of his favorite doctrines, and which occupies the greater part of his first volume. He believed that the planets were originally a part of the solar sphere, from which they had been struck off, at some time, by the shock of a comet in collision with the sun. The materials of different densities being propelled under this impulse with different velocities, he supposed would naturally collect into spherical masses at corresponding distances from their starting-point, and so give rise to a series of planets moving in successive orbits. Their axial rotation was accounted for by the obliquity with which the comet struck the sun, and the consequent twirling motion imparted to its detached portions.

Wild as this hypothesis sounds, when stated by itself, it was advocated by its author with much force and ingenuity. Even mathematics came in for a share in its support, and it was fortified with arguments from the doctrine of probabilities. As all the planets move round the sun from west to east, and nearly in the same plane, they must all have been set in motion, according to Buffon, at the same time, and by a single impulse. Otherwise, the chances would be as 64 to 1 that the six planets then known would not all move in the same direction; and as 7,962,624[1] to 1 that all their orbits would not be within 7½ degrees of the same plane. He extended the calculation still farther, to the size, distance, and density of the different planets, and to the relation in each between its density and the rapidity of its orbital motion. The figures did not all come out exactly right, but in the case of Jupiter and Saturn the theoretical and actual proportions were very nearly alike, and the author observes with much satisfaction, that "we can rarely obtain from pure conjecture so close an approximation to reality as this."

But the most remarkable production of Buffon's genius was his system of organic molecules, with its associated theories of nutrition and reproduction. According to this view, the bodies of all living creatures, animal and vegetable, were composed of minute particles differing in kind and configuration, but all possessing the general character of vital endowment. These were the organic molecules. As we call a compound group of hydrogen and oxygen atoms a molecule of water, or one of carbon, hydrogen, and oxygen, a starch or glucose molecule, so Buffon seems to have imagined a still more complex molecule having the properties of organic life. These molecules, when associated in the form of an organized body, gave to each part its specific character, and thus provided for the physiological activity of the whole. But they were themselves indestructible, and contained in their own substance the essential principle of vitality. When the animal or plant died and was decomposed, its organic molecules were at once ready to assume new combinations. When one animal fed upon another, or an animal upon a plant, the organic molecules of the creature used as food passed into the tissues of that which devoured it, and when an animal in decomposing, enriched the soil and fed vegetation, its organic molecules were absorbed into the structure of the growing plant. Thus these molecules represented the living elements of the material world. Their quantity was never either increased or diminished. They only passed from one form of combination to another, always transferring their activity from the old organisms to the new. Consequently, there was no such thing as destruction of life in nature, but only continual changes in its distribution. The organic molecules were an exhaustless reservoir of vitality, from which all living beings took their origin, and into which they all again returned.

But nutrition and generation require something more than the mere existence of organic molecules. For even supposing these vitalized particles to be present in full abundance and variety, how could they be arranged in proper order, within the plant or animal, so as form its different organs or enable it to reproduce its like?

This want was supplied by Buffon's celebrated idea of *interior moulds*. It is not easy to say exactly what he meant by this expression, except that it was something capable of arresting the molecules and placing them in a certain combination. "In the same way," he says, "that we have moulds for giving to the outside of things any form we choose, suppose that nature can produce moulds which will determine, not only the external configuration, but also the internal structure of bodies formed in them."

Most readers will perhaps say that this definition of interior moulds is only an analogy, and does not include any intelligible idea of their construction. Buffon himself seems partly conscious of this, and makes a rather labored and metaphysical defence of the term, to show that there is nothing in it contradictory. However that

[1] Œuvres Complètes, Tome xv., p. 336.

[1] Uranus was only discovered in 1781, thirty-two years after the appearance of Buffon's first volume. If the author had included Uranus and Neptune in his calculation, he might have made the chances in favor of his theory as 4,586,471,424 to 1.

may be, the "interior mould" is something which belongs to the entire body and also to each of its separate parts. The whole body is a mould which determines the position and arrangement of its different organs. Each organ, and each part of an organ, when supplied with organic molecules from the food, selects those which are like its own and rejects the rest; while it arranges the incoming molecules in proper order, and incorporates them with its substance, still preserving its original form and texture. In this way the body is nourished and grows, not by addition to its exterior, but by the intimate penetration and selection of appropriate molecules throughout its mass; and all by means of its "interior moulds."

The mysterious phenomena of reproduction were fully explained by the aid of organic molecules and interior moulds. This explanation was even the simplest in cases which we usually consider the most wonderful; as where plants, worms, or polypes reproduce and multiply without sexual generation, by the processes of division or budding. Suppose, in a polype, the organic molecules to be arranged throughout in the form of minute polypes, just as a cube of salt is made up of an indefinite number of smaller cubes, then any part of such an organism, when separated from the rest, will reproduce an entire polype, because it already contains the whole of it in miniature. In an animal or plant which multiplies by budding, the organic molecules absorbed with the food are distributed in due proportion until every part has received its full supply. After that, the surplus molecules are sent back from the different organs and collected in some particular locality, where they form a composite mass, representing the materials of the whole body. Such a mass is a bud; and, when separated from its stock and placed where it can absorb nourishment for itself, it of course grows into an organism like its parent, because it is composed of the same kind of molecules, arranged in the same order, and in the same proportions.

In sexual generation, like that of man and the higher animals, the process is more complicated. Here, again, every part of the body absorbs the organic molecules appropriate to itself, and moulds them into the substance of its own texture. But the excess of material, not required for the nourishment of the organs and returned from them as superfluous, appears in the form of a liquid, and is deposited in a special reservoir. This liquid, made up of contributions from every part of the body, is the seminal fluid. It is a mingled organic extract of the entire frame, and thus contains all the materials necessary for reproduction. Its place of deposit is in the testicles and vesiculæ seminales.

The extreme activity of this seminal fluid, the concentrated essence of the animal organism, is proved by the formation of the spermatic animalcules. According to Buffon, these are not original or essential ingredients of the seminal fluid, but a product of its restless vitality, an incidental form in which its generative power is exhibited.[1] They represent the first assemblage of its organic molecules, as combined into moving particles large enough to be visible by the microscope.

But the female also produces a seminal fluid in the same manner and with the same general qualities as the male. Both fluids, male and female, contain all the elements common to either sex. The only difference between them is that each fluid being a special extract of the body from which it comes, that of the male contains molecules representing the male organs, that of the female those representing the female organs. Buffon entirely rejects the doctrine that viviparous females produce by means of eggs. For him, the ovaries are testicles; the Graafian follicles are reservoirs of nutritious lymph; and the corpora lutea are glandular structures, which produce the female seminal fluid by a process of filtration.[1]

Thus Buffon's theory accounts for reproduction in a very simple manner. Generation is only, in a higher degree, the act of nutrition, operating with the surplus of nutritive material. A mixture of the male and female seminal fluids contains all the organic elements of both sexes, and, therefore, represents the species. In the cavity of the uterus it finds its appropriate nidus and nourishment, and grows into a perfect organism like that from which it came. The theory was supported by abundance of proof; for it explained to a charm most of the important phenomena of generation. 1. During infancy and childhood there is no power of reproduction, because all the organic molecules are taken up by the growing tissues; it is only after puberty, when the body has acquired its full growth, that there is a surplus of organic material, to be filtered through the testicles in the form of seminal fluid. 2. The young child or animal usually resembles both its parents, because its substance is derived from both the male and female seminal fluids. 3. Creatures of small size, like insects, mice, and guinea-pigs, have a numerous progeny, because the demands of nutrition are easily satisfied, and there is a large superfluity left for reproduction; but those of greater bulk, such as man, the horse, the elephant, produce only a single young one at a time, and at long intervals, since the nourishment of their own bodies takes up most of the organic molecules of the food. All these facts were plainly in accordance with the new system.

Indeed, the only difficulty about Buffon's theory (if it is not a contradiction to say so) was that it made the matter too easy. If the seminal fluid of the male contains all the organic molecules necessary to make an embryo, why does it not make one? Why should not the male be self-producing? And why should not the female, on the other hand, have a progeny of little females from her own seminal fluid without the necessity of impregnation by the male? According to the theory of organic molecules, every adult animal produces a fluid capable of generating young. But, in point of fact, the female must also receive the fluid of the male; and, without the concourse of the other, each sex remains barren.

This is the great difficulty in Buffon's way; and, to do him justice, he does not try to conceal or evade it, but struggles with it manfully for sixteen octavo pages. The reader almost feels a sympathy for him when his system of reproduction, after running so smoothly everywhere else, is arrested by so bulky an obstacle as the fact of sexuality. His explanation is full of ingenious hypotheses, but it is very complicated, and leaves in the chain of evidence so many gaps and contradictory possibilities that it is hardly worth while to remember it. Nevertheless, the author thinks too well of the system to have his faith in it shaken by one or two imperfections. The main part of it, he says, he has "proved by so many facts and arguments, that to doubt it is hardly possible." He does not doubt it himself, and he avows that he "entertains no uncertainty whatever as to the basis of the theory, after careful scrutiny of its principles and the most rigorous estimate of its consequences and details."

Buffon's system has its widest extension and most splendid success in the dim regions of equivocal and spontaneous generation. His organic molecules are the genuine repositories of life; the interior moulds of particular organisms being only the means of arranging them in special forms. And when, by the death of an animal, and the decomposition of its body, its organic

[1] Œuvres Complètes, Tome ix., p. 335.

[1] Ibid., p. 345.

molecules are released from the constraint of their interior moulds, they are set at liberty, living and active as ever, to be disseminated in any direction where chance may carry them. In this condition they are the universal seed of nature; without any character of specific organization, but containing all the prolific force of the bodies from which they came. After a time they are absorbed by some other mould, animal or vegetable, into which they transport their own indestructible qualities of nutrition and life. But during the interim, after leaving the old organism and before their incorporation into the new, they form by their reunion a multitude of living structures which do not belong to any of the ordinary or recognized species in nature. Such are the moving corpuscles of the seminal fluid, the microscopic fungi and infusorial animalcules of organic solutions, and, in their larger varieties, the eels of starch-paste and vinegar, and even earth-worms, mushrooms, and entozoa. All these creatures come by spontaneous generation. They are the connecting link in nature between the simple organic molecule, on the one hand, and the complete animal or plant on the other. This exuberant force of production is always in activity. Notwithstanding the death of any number of existing creatures, the total quantity of life on the globe cannot be diminished even for a moment; for it continues uninterrupted in the organic molecules, which pass and repass, from the animal to the vegetable, and from the vegetable to the animal, or produce in the interval an endless variety of spontaneous generations.

No doubt Buffon was in love with his system, and admired it for its own sake. Still, he had a fair share of what Condorcet calls the "sentiment of his own superiority," and ends one of his chapters in a strain that sounds, at this day, rather exalted. "I will add nothing more," he says, "to these reflections. To be accepted, or even to be comprehended, they require a profound acquaintance with nature, and complete freedom from prejudice; so that for the majority of my readers, a longer explanation would still be insufficient, and for those who can understand me, it would be superfluous."

When Buffon's work appeared, it attracted at once the curiosity and applause of the public. The reviewers praised it as "an honor to both the age and the nation."[1] Hume said that its author "gave to things, no human eye had seen, a probability almost equivalent to proof;" and Needham declared that his investigations on the seminal fluid would be a subject of admiration "for centuries to come." All his readers, however, were not of that opinion. There were some who did not accept the doctrines of the book, and who feared that its popularity might have a bad effect. Buffon's high position, his magnificent style, and his confident tone of assertion, alarmed his adversaries, and made them dread his influence on the public mind. His theory, they said, was "filled with dazzling paradoxes, as disastrous to the principles of science as the mines of a skilful engineer to the solid ramparts of a fort." This difference led to a warm discussion. The Abbé de Lignac wrote an anonymous treatise against Buffon's work, under the title of *Letters to an American*,[2] where he criticised the system of moulds and molecules, and said that, instead of describing natural objects, it contained only "the philosophical dreams of M. de Buffon." Buffon's friends, on the other hand, denounced the "American Letters" as a lampoon. They accused de Lignac of having written it out of envy, and to punish Buffon for not showing more respect to his friend Reaumur. Deslandes called the book an imposture, because it was entitled *Letters to an American*, when it had not been written, in the form of letters, to anybody; and because the title-page bore the imprint of Hambourg, though it was really printed at Paris. "That makes no difference," replied de Lignac, "the only title-page that can be called an imposture, is one that promises something the book does not contain; like a natural history, for instance, made up of disjointed and extravagant systems, without anything natural about them."

Buffon's critics were especially dissatisfied with the organic molecules of the seminal fluid, and their wonderful capacity for uniting into an embryo. "If these molecules," they said, "are indifferently the elements of a plant, a man, a dog, or a polype, how can they combine to make either? We might as well go back to Epicurus and his atoms." One of them was asked, by an admirer of Buffon, which he would rather be, the author of the *Histoire Naturelle* or that of the *Lettres Américaines*. He replied that he would rather be an organic molecule, because then he would have more intelligence than either of them. Buffon held his own against these attacks without making any direct reply. His literary talent alone was almost enough to secure him the victory; and if his opponents denied the truth of his theory, they generally had nothing better to offer in its place.

The only real investigations at that time which seriously threatened Buffon's system were those of Haller on fecundation and development. They first appeared in 1753, four years after Buffon's first publication. Haller had examined the ovaries of sheep both before and after impregnation, and observed the condition of the Graafian follicles and corpora lutea. Since corpora lutea, according to Buffon, were glands for producing a seminal fluid, they must, of course, be formed before impregnation and could only open, to discharge their fluid, at the time of conception. Haller declared that there were no corpora lutea in the ovaries during the period of heat, nor immediately after conception; at which time there was nothing to be seen but a simple orifice leading into a ruptured follicle. The glandular structure of the corpus luteum was only formed some days afterward, and, therefore, could not have furnished anything essential to conception.[1] We now know the accuracy and value of these observations by Haller, and can hardly understand how those of Buffon should have been so preposterously incorrect. But at that time it was difficult to decide between them. Both were men of high scientific reputation, and the system of organic molecules was too promising and seductive to be surrendered at the first attack.

But, as time went on, it began to suffer from its own defects. After thirty or forty years' trial, its promises had not produced anything, its obscurities had not been cleared up, and the organic molecules were still as hypothetical as ever. One of Buffon's tenets for explaining reproduction by division, was that the simpler organisms, like plants and polypes, were composed of particles in the form of their own miniature, and he had argued at great length that this kind of structure, if we only thought so, was as simple as any other. Malesherbes[2] finally concluded that it would be of no use to think so, because the thing itself was impossible. "To be convinced of this," he says, "let any one try to draw a picture of this pretended polype entirely made up of similar polypes; or let him get a quantity of little wooden or ivory figures in the form of polypes, and then see whether he can put them together in any way so as to make an entire polype of the same shape. I defy him to do so."

[1] Journal des Savans. Paris, Octobre, 1749.

[2] Lettres à un Ameriquain, sur l'histoire naturelle, de M. de Buffon, à Hambourg, 1751.

[1] Histoire de l'Académie Royale des Sciences, Année 1753, p. 134.

[2] Observations sur l'histoire naturelle de Buffon, Paris, 1798.

Buffon's interior moulds had no better luck in the end. When it came down to genuine matter of fact, no amount of verbiage could make it plain what sort of things they were nor how they operated. Malesherbes declared that the very idea of a mould is that of something which acts by its surfaces; and that consequently the hypothesis of interior moulds is a mere metaphysical subtlety, without any real application. "To make use of interior moulds, therefore, for explaining the process of nutrition or development, is to solve one difficulty by another; it accounts for one thing by supposition of a second no more intelligible than the first. The truth is, it does not really give any explanation at all; it only answers, like the doctor in Molière, '*Opium facit dormire quia habet facultatem dormitivam.*'"

Another cause of decline for Buffon's system, towards the end of the last century, was the progress of opinion in regard to spontaneous generation. At that time there was much investigation on this subject, especially as to the infusorial animalcules. Needham and Spallanzani were the principal disputants in this field, and attracted to it for some years the attention of the scientific world; the result being at last, a general conviction that Spallanzani's experiments had destroyed the hypothesis of spontaneous generation, at least for the infusoria. The system, therefore, diminished in importance, because this mysterious department of reproduction, which it had explained so well, no longer needed explanation. It thus lost one of its strongest claims to support; and, without being actually disproved, it was discredited to an extent which must have seriously impaired its scientific status.

Finally, it received its death-blow in 1827 from De. Baer's discovery of the ovule in the ovarian follicle of mammalians.[1] De Graaf had supposed, when he first described the ovarian follicles, one hundred and fifty years before, that they were really eggs, and this view was widely accepted. The ovaries of mammalians, like those of fishes and birds, were regarded as clusters of eggs, held together by intervening tissue. But it was not easy to demonstrate, in man and quadrupeds, the discharge of these supposed eggs from the ovary. No observer had ever succeeded in finding one of them separated from its ovarian connections; and the earliest ovum discoverable, in the uterus or Fallopian tube, was of course considerably smaller than the ripe follicle in the ovary. This threw a doubt over the doctrine of De Graaf, and left room for Buffon's assertion that there were no such things as eggs in the mammalian female; that her so-called ovaries were testicles, as much so as those of the male, and that she produced a seminal fluid, composed of organic molecules, similar to his.

This view was so interwoven with Buffon's whole system, that one could hardly exist without the other, and when the microscopic ovum and its mode of exit from the ovary were at last fully brought to light, so that any one could see them when he chose, the discussion necessarily came to an end. The female testicles and seminal fluid, with their glandular corpora lutea, no longer had a place in court; everything connected with them shared in the collapse, and the entire company of organic molecules, reproductive extracts, composite organisms, and interior moulds disappeared together, like actors at the end of a play.

Another set of ideas, once in high repute, was Bonnet's theory of the *Inclusion of Germs*.

This system was somewhat subsequent to Buffon's, though its author was for many years his contemporary. Bonnet was of a wealthy and influential family in Geneva, where he passed the whole of his life, engaged in the study of natural history and kindred subjects. He became widely known for his attainments in this direction, and was connected with nearly all the learned societies of Europe. He was the friend and correspondent of Reaumur, Haller, Spallanzani, Trembley, and De Saussure. Spallanzani communicated to him in manuscript, for perusal and advice, his own researches on the generation of infusoria; and when the volume appeared, he printed, as part of it, Bonnet's letters in reply.[1]

The personal character of Bonnet had traits of superior excellence, and secured him a large share of attachment and esteem. His disinterestedness and modesty, in regard to his own opinions, were well known, and were often the subject of marked eulogy. He attributed the principal credit for his discoveries in entomology to Reaumur, because he had been inspired by the example and encouragement of this master, under whom he felt "proud to enroll himself as a pupil." Spallanzani calls him the "Philosopher of Geneva," and the "sublime author of the contemplation of nature." His first publications appeared in 1745, and were followed by others at various dates until 1770, after which they were collected in a series of eighteen volumes.[2]

Bonnet presented the curious spectacle of a man under the varying influence of two opposite tendencies; at one time an exact and painstaking observer of nature, at another an irresponsible wanderer in the vaguest of speculations. His earliest scientific work was an experimental investigation on the reproduction of aphides, by which he first demonstrated with certainty the non-sexual viviparous propagation of these insects.[3] It is hardly possible to imagine a more thorough, direct, and conscientious method than that adopted by Bonnet in these observations. He took the young aphis, just expelled from the body of its parent, placed it upon a sprig of fresh leaves, stuck in a pot of earth and covered with a bell-glass, and then watched his solitary prisoner for twenty-one days, until it had grown to maturity and had produced, without fecundation, ninety-five young ones. During this time he kept exact records of the insect's moulting and also of the new births, most of which took place under his own eye. He repeated the trial with aphides of different species, and with those which had themselves been produced in captivity; and he succeeded in raising them in this way, without fecundation, for eight successive generations. For these observations he received the honor of an election as Correspondent of the French Academy of Sciences. He also made valuable contributions to natural history on the multiplication of aquatic worms by division, on the growth of plants, on the function of leaves, and on the habits of insects.

On the other hand, he constructed, out of his own meditations, a graduated system of things visible and invisible which he called the *Scale of Being*, and which formed the subject of one of his later works, published under the title of *Contemplation de la Nature*. It embraced the structure of the entire universe, from the simple elements of inorganic matter to the "Celestial Hierarchies" of other worlds. According to this system, there are no gaps or sudden variations in nature, but only a continuous series of combinations and modifications in ascending grade. Everything is immediately connected with that which precedes and with that which is to follow it. At the beginning of the volume there is inserted, for the reader's convenience, a printed table exhibiting the regular succession of natural

[1] K. E. von Baer. De ovi mammalium et hominis genesi, Lipsiae, 1827.

[1] Spallanzani, Opuscoli di fisica animale et vegetabile.

[2] Ch. Bonnet, Œuvres d'Histoire naturelle et de Philosophie. Neuchatel, 1779.

[3] Œuvres de Bonnet. Tome i., p. 19.

objects from gaseous substances up to man. The purely inorganic elements in various grades of combination lead to the composite earths, sulphurs, and metallic bodies; thence through the vitriols, or metallic salts, to ordinary saline substances in crystalline form, and thence to compound rocks of heterogeneous structure, like granite and sandstones. Immediately above these are rocks like slate, talc, and asbestos, which exhibit a laminated or fibrous texture, and which may therefore be considered as "the connecting link between inorganic and organic solid bodies." This point is especially important in Bonnet's scheme, for it marks the passage from dead matter to living organisms. It is not altogether what its author could wish, but he makes the best of it by quietly putting its burden of proof on posterity. "It must be acknowledged," he says, "that the transition here is not quite so perfect as in many other cases. It looks as though nature, in this instance, had made a leap, but the gap will undoubtedly be filled up as our knowledge increases in precision and extent."

Once fairly started among organized structures, the scale rises easily through corals, lichens, and mushrooms to plants in general; through the sensitive plant to animals, from insects to snails, serpents, eels, and fish; through flying fish to birds, from birds to bats and quadrupeds, and so on to monkeys, apes, and man. But this extended gradation is not enough for Bonnet. He has also the "Celestial Hierarchies" and the "Gradation of the Worlds," some of which, he is persuaded, are as superior in physical and moral organization to our earth as man is above the ape.

The frontispiece to Bonnet's work is an engraved portrait of the author, taken, as he tells us, when he was "plunged in deep meditation on the restitution and perfectibility of living creatures." It renders, he thinks, his "reflective expression" with much success. One cannot help thinking it fortunate that the artist saw him just when he happened to be meditating on so abstruse a subject.

Bonnet's great theory of reproduction, or the "Inclusion of Germs," appears mainly in his work, entitled, *Considérations sur les Corps Organisés*, with some additional amplifications in the *Contemplation de la Nature*. His thoughts were turned in this direction partly by Trembley's recent discovery of the multiplication of fresh-water polypes by division, partly by his own observations on aquatic worms, and on the reproduction of aphides. He was further strengthened in his opinion by Haller's observations, which appeared in 1758, on the formation of the chick in the fowl's egg.

There were, about that time, three different views entertained as to the nature of sexual generation.

I. The spermatic animalcules of Leeuwenhoek, one or more in number, were arrested in the uterus, and there became developed into embryos. According to this view, the male parent furnished the living germ, the female only providing for its care and nourishment.

II. The seminal fluids of both sexes, when mingled together, produced the embryo, *de novo*, by a mutual arrangement of their organic particles. This was the doctrine of Buffon, and attributed an equal and similar action to both parents.

III. The germ *pre-existed* in the ovary and egg of the female, and was only stimulated to further development by the seminal fluid of the male.

Bonnet accepted the third of these doctrines. He believed in pre-existence of germs, but he gave to the idea a much wider extent and significance. The germ as he understood it was not only a structure capable of being developed into a living creature; it actually contained, within itself and ready formed, all the parts of the future organism. These parts were exceedingly minute, delicate, and transparent, but they nevertheless existed, though as yet imperceptible to the senses. It was only their small size, their softness and transparency, which prevented their being seen. After impregnation they grew larger, more consistent, and more opaque, and then first became recognizable as the organs of the embryo. These organs accordingly were not things of new formation. They only showed plainly, at a certain period of development, what had previously existed in invisible form. The author extended this doctrine without hesitation to its farthest limits. For him every seed contains a plant in miniature. In an animal germ, every organ and tissue, without exception, is already present—the heart, the vessels, the liver, the kidneys, the intestine, the nerves, and the brain. Consequently, there is no such thing as generation, if by that we understand the production of a new being, or even of a new organ. What appears to be such is only the development of something that was in existence beforehand.

These views were adopted by some and rejected by others, the physiological theorizers of the day dividing into two parties, known as the *Epigenesists* and the *Evolutionists*. The epigenesists were those who believed, like Buffon, that the embryo was a new formation, produced by the union of molecules and the successive organization of different parts. The evolutionists,[1] on the other hand, maintained with Bonnet the pre-existence of germs, and insisted that nothing in the embryo was newly formed, but only enlarged and solidified by development.

These notions were sustained in some degree by the discoveries of Haller in the incubation of the fowl's egg. Haller had studied the development of the chick day by day, and had noted the appearance of its different organs and envelopes. His masterly observations on the yolk-sac and its connection with the embryo, were held by the evolutionists to be decisive as to the pre-existence of the germ and its essential parts. "The membrane enclosing the yolk," says Bonnet, "is continuous with the intestine of the chick. The arteries and veins of the yolk are branches of the mesenteric vessels of the fœtus. The blood circulating in the yolk vessels receives its impulse from the fœtal heart. The yolk is therefore essentially a part of the chick. But the yolk exists in the egg before impregnation; consequently, the chick also exists in the egg before impregnation. . . . . This proves incontestably that the embryo is at first a part of the parent fowl, and that its existence is anterior to the time of conception."

Bonnet's assumption of the pre-existence of the embryo, as well as of the germ, was not without a certain plausibility. The organs of the embryo, when first formed, are in fact not only small, but also colorless and transparent; so that they are seen with considerable difficulty, and may even be overlooked for some time after they are really present. Bonnet says, this is the mistake made by the epigenesists. "They estimate the time when the parts of an animal are first created by that at which they first become visible; and whatever cannot be seen, they assume has no existence." But the organs in an imperfect embryo might very easily have been there, though not sufficiently distinct to meet the eye. "Do you wish," he says, "a short and ready demonstration of this? When the lung of an embryo chick is first perceptible to the senses, it already measures ten one-hundredths of an inch. It is evident that with a size of only four one-hundredths it would have been visible, were it not for the extreme transparency of its tissue."

And so on, of all the other parts. Bonnet has more

[1] It is unnecessary to say that this term was used, during the last century, in a sense entirely different from that which attaches to it now.

faith than the epigenesists. He believes that the organs of an embryo were there before he could see them, and that they even existed from the beginning, though invisible, in the unimpregnated egg.

But if the germ contains all the organs of the chick ready formed, only small and undeveloped, it contains ovaries as well as the rest; and these ovaries contain the germs of the next generation. It is plain the series cannot end here. The germs of the second generation are chicks in miniature, as much as those of the first. Consequently, they contain their own ovaries and germs, which in turn contain others still; and so on without any definable limit, one set of germs within the other in geometrical progression, each germ containing not only its own embryo, but also all the embryos that can possibly be produced from it in unnumbered generations hereafter.

Bonnet does not shrink from the magnitude of this spectacle. He rather glories in it, and enjoys the contemplation of its unlimited perspective. "For my part," he says, "I like to extend as far as possible the limits of creation. There is a pleasure in the thought of this magnificent series of organized beings, enclosed, like so many little worlds, one within the other. I see them receding by degrees, diminishing in regular order, and losing themselves at last in an impenetrable night. It gives me a sense of satisfaction, when I look at an acorn, to see in it the germ of a majestic oak that centuries hence will shelter the birds and the beasts under its branches; or still more to behold in Emilia's womb the germ of a hero who thousands of years hereafter will found an empire, or perhaps of the philosopher who shall discover to mankind the cause of gravitation, the mystery of reproduction, or the mechanism of our existence."[1]

This prospect, however, for the germs of the future which Bonnet found so attractive, was not as satisfactory to some of his contemporaries. They even haggled with him about the past. If the age of the world, as generally admitted, was six thousand years, and if each generation of man is completed in thirty years' time, that would give two hundred successive generations since Adam and Eve, with about a thousand million human beings at present on the earth. All these inconceivable members must have been contained under the form of germs in the ovaries of Eve. The minuteness of the embryo of the two hundredth generation, when enclosed in the body of our first parent, was declared to be something incredible. Still more so, for plants which grow and fructify every year. Hartsoeker calculated that the relation in size between the first wheat-grain and that to be produced at the end of six thousand years would be expressed by the figure of unity, *followed by thirty thousand zeros*.

All this did not give Bonnet or his friends any discomfort. Such terrific estimates may serve to confound the imagination, but logic always finds a sure refuge in the infinite or indefinite divisibility of matter. Hartsoeker and his followers, according to Bonnet, put the senses and the imagination in place of the understanding. They want to see and touch, so to speak, what can only be comprehended by an effort of the mind. The hypothesis of the inclusion of germs is above the level of such calculations, and is, he concludes, a "splendid triumph of pure reason over the senses."

Bonnet's theory is by no means confined to the simple hypothesis of one germ included within another. It is an extensive and elaborate system, ramifying into all departments of natural history and physiology. The included germs not only exist before fecundation, but they are nourished, and grow in a way analogous to that of adult bodies. There can be no doubt of this, because the fowl's eggs certainly increase in volume before fecundation, and are to be seen in the ovary of many different sizes and grades. But the yolk is essentially a part of the young chick. Therefore, if the yolk grows before fecundation, the embryo does also. Beside, in the theory of inclusion, the contained germs diminish progressively one within the other, to an inconceivable minuteness. The outermost germ is, of course, the largest, and is nearly ready for impregnation. But when it has been fecundated, and has expanded into the body of an adult female, the next included set of germs have in turn come to be as large as the other was before, and so on in continuous order, the smaller germs gradually moving up in the scale of magnitude, to be ready for impregnation when their time arrives. The process of nutrition and growth must, therefore, be going on in these embryonic organisms, and has been going on in them ever since the creation.

But how is the nutrition of the germs provided for, and what are the materials used in their growth?

It is well known, says Bonnet, that the different parts of the body are not nourished directly by the blood. A more delicate and colorless fluid, called *lymph*, separated from the blood by appropriate organs, serves for the immediate supply of the tissues, and as these tissues vary in fineness and consistency, we can hardly doubt that the secretory organs prepare for them different kinds of lymph, more or less attenuated to correspond with the delicacy of structure in separate parts. Some tissues, as, for example, the brain and nerves, must require a lymph many times finer and more subtle than that employed for the grosser parts.

But the included germs are made up of tissues finer still. If we admit that there is no such thing as real generation, and that everything has been preformed from the beginning, then the germs which are to make their appearance a thousand years hence, have now actually within them, and incalculably minute, all the parts characteristic of the species. Imagine the heart, the brain, the nerves, and the stomach of such an embryo. Certainly, no lymph could penetrate these tissues, or be of the least use for their nutrition. What fluid is there in the body sufficiently attenuated and ethereal to insinuate its particles into a structure of such delicacy, and incorporate them with its substance? There is only one, and Bonnet secures it. This precious and double-distilled material, which is alone capable of nourishing an infecundated germ, is the *nervous fluid*.

The nervous fluid was not an invention of Bonnet's. It was generally acknowledged, in his time, as the immediate cause of nervous action. Like the electric fluid, it was intangible and invisible, and was known only by its effects. Its invisibility was due to its vapors or aerial constitution; and this enabled it to circulate in the delicate passages of the nervous tissue, which were themselves invisible, owing to their minuteness. The nervous fluid, or "animal spirits," so-called, after being elaborated in the brain, was disseminated through the nervous channels to the various organs of sense and motion. Its existence was proved by a very simple fact. If you tie a nerve going to a muscle, the muscle is paralyzed. How could a ligature cut off the nervous influence, except by arresting the passage of a fluid? There was, therefore, little or no doubt in regard to it.

The nervous fluid, in Bonnet's system is not entirely dissipated in the exercise of sensibility and muscular action. The unconsumed portion, after returning to the brain, was again sent out by similar channels, to be used in nutrition. It was carried by the maternal nerves to the ovaries, and there immediately distributed to the germs "of the first order," or those nearest maturity.[1] Elaborated anew and still further spiritualized by the organs of this delicate

[1] Œuvres de Bonnet, Tome v., p. 206.

[1] Œuvres de Bonnet, Tome x., p. 10.

structure, it supplied a finer nourishment to the germs of the second order; here it underwent a similar preparation for those of the third order, and so on, to the belated and unfortunate germ which "would not be ready for fecundation till the end of the world."

This staggering array of infinitesimals, in structure and function, only serves to increase the author's admiration and strengthen his confidence. "What an abyss of wonders," he says, "in the human brain. Even a single fibre of the brain is itself an abyss. What shall we say, then, if all these mysteries, existing in the adult body, are repeated and concentrated in so many organized atoms, enclosed one within the other, and growing constantly smaller, in indefinite progression?"

The act of impregnation, in reproduction by sexes, comes in for a very easy and natural explanation. The nervous fluid is the appropriate nourishment for an infecundated germ. When this germ becomes a fœtus, it will be supplied with lymph, and its organs will grow like those of the adult. But how can it make the transition from one state to the other, and how are the finely woven tissues of the germ-embryo to be made capable of admitting the grosser substance of the lymph? This is exactly the function of the seminal fluid. It is not only a source of nourishment for the mature germ, but it has a special stimulating influence on the embryonic heart. The pulsation of the heart in the germ-embryo is very faint, and only serves for the circulation of the nervous fluid. Consequently, the infecundated germ increases but slowly, and never gets beyond a certain stage of development. But when the seminal fluid comes in contact with it, and penetrates its substance, the heart's pulsation is increased in force. This causes an expansion of the circulatory channels, an increased volume of the circulating fluid, and, consequently, more rapid nourishment; and thus the limit is passed between the condition of the germ-embryo, whose tissues only admit nervous fluid, and that of the growing fœtus, that can thrive upon the lymph. Once begun, the process naturally continues until the body has attained its full development.

Still the theory of inclusion was not altogether free from difficulty. One of its most troublesome problems was that of intestinal worms and other parasites. Bonnet wrote a special treatise on the tænia, partly devoted to different theories of its origin. He rejects, of course, the idea of equivocal or spontaneous generation. But if, like everything else, it comes from pre-existing germs, are these germs introduced into the intestine from without, or did they exist beforehand in the embryonic human body itself? If so, the germ of the first tapeworm, and, in fact, of all which have existed since, must have been included in the body of the first man. There are objections to be met in either case, but the most singular are those connected with the second.

In this view the tænia has a contemporaneous origin with man; that is, it already existed in Adam and has passed so into his posterity. But according to Genesis, the animals were all created before Adam. Therefore, the tænia must have first lived in a foreign element; and the fact is, we never find it except in the intestines. Besides, how can we suppose such a pest to have been placed in the body of our innocent progenitor, living in the earthly paradise of the Garden of Eden? Valisnieri, who adopted the contemporaneous theory, had an odd answer to this objection. He assumed that before Adam's fall the intestinal worms did not do him any harm, but, on the contrary, were rather useful in "consuming the superfluous humors and gently stimulating the intestinal walls." Bonnet thinks this explanation a trifle far-fetched, and doubts whether Adam, in his state of innocence, had any superfluous humors or needed any tapeworm to excite his intestines. He prefers the idea of M. Leclerc, that the intestinal worms, which are now so troublesome, only existed at first in Adam under the form of eggs, and were not hatched until after his disobedience.[1]

But the line of descent for tapeworms is not yet quite clear. Granting that they existed in Adam, either as eggs, or as worms, how did they get into the body of Eve, through which they must have passed, for transmission to posterity? The most direct route from the intestine, according to Valisnieri, would be through the thoracic duct, which "mounts upward along the ribs," to that one which was taken for the body of Eve. Bonnet is inclined to adopt a simpler and less miraculous method of transfer, by supposing that the eggs of the tænia are so small that they can pass through the bloodvessels, and thus reach the vesiculæ seminales. "In this way," he says, with a puzzling kind of *naïveté*, "we can explain the whole thing without much difficulty, and *without having recourse to divine power*."

However, the author regards the introduction of parasitic germs from without as on the whole the more probable theory of their origin, especially as the weight of evidence was already in that direction.

The system of Bonnet has applications to many different points of general physiology, such as the resemblance of the young animal to both parents, the production of hybrids and monstrosities, and in particular to non-sexual generation, or multiplication by budding and division; all of which is explained, with more or less ingenuity and success. It had an apparent support in several recent and important observations; such as the existence in certain seeds, of an embryo plant, the multiplication by interior germs of *volvox globator*, the reproduction of aphides without impregnation, and Haller's researches on the formation of the embryo chick. Haller himself defended it from a variety of objections, and adduced a number of arguments in its favor.[2] But the theory itself went so far beyond the limits of possible demonstration, that its basis of reality bore no calculable proportion to its towering superstructure. It discounted the results of embryological discovery at too exorbitant a rate; and it could not afford to have any of them turn out differently from what was expected. This happened in the case of the mammalian egg. Subsequent observations, made with better facilities, showed that the organs of the fœtus do not pre-exist in the ovum, in the sense imagined by Bonnet. The impregnated ovum has, it is true, a remarkable property, by which each separate part assumes afterwards a definite shape, and becomes a distinct organ. But the actual configuration of these organs is certainly not present in the ovum, because we can now see its original structure, as well as the intermediate forms which are to be replaced by those of the future embryo. The system of the inclusion of germs, in the time of its glory, embraced the whole history of the world from beginning to end, and the mechanism of growth and reproduction throughout the organized creation, it claimed for its support the results of scientific discovery, and of logical deduction; but it came to grief when the study of embryology had reached a certain stage in its development, and had demonstrated the actual constitution of the mammalian egg.

DILATATION OF THE STOMACH AS A DIAGNOSTIC MEASURE.—Dr. ROSENBACH suggests, in the *Deutsche Med. Wochenschrift*, No. 2, 1882, the distension of the stomach with carbonic acid developed from the action of the Seidlitz powders, taken separately, as a valuable means of examining the condition of the stomach and as a fixed boundary for study of the abdomen.

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[1] Œuvres de Bonnet, Tome iii., p. 140.

[2] Haller, Elementa Physiologiæ Corporis Humani, 1766. Tome viii, Sect. ii; Art. xxix.

ON THE

INFECTIOUS CAUSES OF INFLAMMATION.

Two Lectures delivered at the Pathological Institute of the University of Leipsic, December 8 and 9, 1881.

BY PROF. JULIUS COHNHEIM.

LECTURE II.

(Reported for the MEDICAL NEWS, by special permission of the Author, by Dr. WALTER MENDELSON.)

GENTLEMEN: We were speaking, yesterday, of the investigations of Koch and others into the nature of anthrax. Let us now continue the subject by considering some of the causes of other infectious diseases. Though we have progressed very far into the knowledge of the virus of anthrax, the investigations of the causes of the great majority of the other infectious fevers have so far not been crowned with a like success. It is true that in a number it has been possible to find minute organisms in the blood of those affected, but in no other case (if we except trichinosis) can we trace the whole connection between these microphytes and the disease, as has been done in anthrax. A decade has elapsed since Obermeir found in the blood of patients suffering from relapsing fever certain wavy, thread-like bodies, the *spirillæ*. Their presence in the blood was observed to correspond to the relapses of the fever, the febrile state persisting so long as they remain and becoming less intense as they diminish in numbers, while during the intermissions no spirillæ can be found. Koch and others have made experiments with a view to propagating them, but so far without results. In typhoid fever, Klebs and Eberth have found a bacillus, which they claim to be the specific virus. You all know that micrococci have been found in the intestines and dejecta of typhoid-fever patients for a long while; but I need hardly tell you that such exist in the intestines and fæces of healthy persons, and are of no significance. These two investigators, however, have succeeded in finding in the lymphatic glands and vessels in the vicinity of the typhoid ulcers, rod-shaped organisms, bacilli, which are somewhat smaller than those of anthrax. Klebs and Tommasi-Crudeli, of Rome, have found a somewhat longer bacillus in patients suffering from malarial fever, and they have not only found them in the patients, but in the soil of the malarious districts. In lepra, Neisser, of Leipsic, has discovered a bacillus existing in the nodes on the skin, which is very much smaller than any of the foregoing, requiring a very high magnifying power to become visible. He found them quite constantly, lying closely packed together, and to their increase he attributes the growth and distention of the nodes. Many years ago, Hansen, a Norwegian, described what he supposed to be the specific leprosy germ; but what he saw were simply micrococci, and certainly, by the methods he used, it is impossible to demonstrate the bacilli found by Neisser. Neisser has further discovered the specific virus of gonorrhœa, this time a micrococcus; and Klebs has published at various times the existence of microphytes in a number of infectious diseases, among which I might mention syphilis and lobar pneumonia; and although other investigators have not always had the same success in finding them, and thus confirming their existence, still, any statement coming from this excellent authority must be looked upon with the highest consideration.

Opposed to those who seek for each infectious disease its virus in a well-defined and separate germ, there are a certain number who deny the specific nature of these pathogenic fungi, but hold that the same species, differing in form during different generations, both morphologically and physiologically, may cause the different infectious diseases. At the head of this school stands Nägeli, of Munich, who with his pupils has labored hard to uphold this theory; a theory which I hope to be able to show you later, gentlemen, will not bear the test of close critical investigation. Even though this view were correct, the parasitic hypothesis of the nature of infectious diseases would of course be in no wise affected; still, it is a question too pregnant of interest to be passed over in silence. If we consider the question of the changeability of the pathogenic organisms, surely you must agree with me that, from the point of clinical experience alone, we must reject such a view. We know that there is no class of diseases more definite in their course than the infectious ones, none whose individuality is more clearly stamped upon them. As far back as we have any trusty records at all, measles has always been described with the same symptoms that it has to-day; scarlet-fever the same; and so on I might multiply instances; and although it is true that in certain epidemics some symptoms appear more prominently than others, and even that in the course of centuries, certain infectious diseases have become modified in some particulars, still, it is unheard of that these diseases should have changed any of their characteristic features, or that one should even have become transformed into another. There exists not one reliable record of the contagion of measles producing aught but measles, or that a small-pox patient ever infected any one with anything but small-pox; and though there have been attempts, from time to time, to show that measles in one has produced scarlet-fever in another, and *vice versa*, yet, in the few cases which have been adduced in support of this assumption, it has usually been a question of the rash of measles becoming so confluent as to resemble that of scarlatina. Similarly, typhus and typhoid have been compared, but it seems to me that their only points of resemblance lie in their names.

Now, if it were really true that the different infectious diseases were caused merely by different forms of the same fungus, it would certainly be justifiable to suppose that the changes from one form to another might take place in the patients themselves, and that a case beginning, say as measles, should end as scarlet-fever or as diphtheria, or some other zymotic disease, or, at least, that an epidemic should change its nature in the course of its career. It is, however, almost superfluous to say that such an occurrence has never been noticed.

Conclusive proof of the mutation of form could only be furnished by actual observation and experiment on the schizomycetes themselves, and this Buchner has tried to afford. A work recording his observations appeared last year, and, as it contained some apparently startling revelations, it created a great sensation at the time. By repeated propagations he affirmed that the highly virulent *bacillus anthracis* could be changed into the harmless hay bacillus, two microphytes whose appearance and metamorphoses exactly resemble each other. Were this true, it would indeed be a striking and most important fact, but, unfortunately, his observations have not been confirmed by other investigators.

It is only a few weeks ago that the results of the labors of Koch and some of his pupils have been published, which entirely and conclusively upset Buchner's statements. They show that Buchner did not observe the needful precautions to eliminate from his experiments all sources of error, for, by observing the necessary care, Koch was able to propagate either bacillus indefinitely, without the slightest change taking place in its nature. Indeed, the very methods which Koch used as far back as 1878, to obtain one kind of bacillus free from admixture of others, go to prove the untenability of Buchner's views. He found that when a putrid fluid from any source was inoculated into the wounds of rabbits, mice, or other animals, one kind of the many schizomycetes originally present

finally gained the upper hand, and produced a certain form of traumatic disease. If another animal was now inoculated from the individual so affected, that form of bacillus was invariably found which had in the first instance gained the ascendancy. If we take these facts, combined with those furnished by clinical medicine, into consideration, I think we will have good grounds for believing that the separate characteristic infectious diseases correspond to equally separate and characteristic forms of fungi, or, to express it a little differently, that each infectious disease owes its peculiarities and typical course to the vital attributes and development of the organism which causes it.

Another thing which speaks very strongly in favor of a differentiation, is the *incubation* stage noticed in infections. In the great majority a certain period of time elapses between the reception into the system of the virus and the appearance of symptoms, and during this period of *latency* or *incubation*, the patients usually feel in good health, or at least show no *specific* symptoms. Still another, and even more remarkable fact, is that in each disease the stage of incubation is of a different length, and that in each it lasts a definite number of days. I really hardly know of any more striking evidence in favor of the parasitic theory of the causes of infectious diseases in general, and specific nature of the separate pathogenic germs in particular, than is given us by this century-old experience. It can certainly not depend on the quantity of virus introduced into the system, that measles invariably appears on the ninth to eleventh day after infection, but rather that the virus needs this period of time in order to develop to a morbific agent. Anthrax only becomes apparent when the spores have developed to bacilli, and the symptoms of trichinosis, the fever and myalgia, make themselves noticeable only after the intestinal trichinæ have developed from those eaten with the infected meat, and from these a new generation has been hatched. The number of trichinæ introduced may modify the degree and intensity of the disease, but never its typical course.

Thus everything seems to point to a *contagium vivum*, against which no other valid objection can at present be raised than that in so many infectious diseases its existence has not as yet been absolutely demonstrated.

If we now apply all that we have been discussing to the infectious forms of *inflammations*, I think we may formulate our knowledge thus: that the alterations in the vascular walls of certain localities, which result in changes in the circulation leading to inflammations, are due to schizomycetes. The reason that these fungi establish themselves, after getting into the system generally, in one particular organ or part of the body, depends, no doubt, on the same reason that the trichinæ born in the intestines are finally found in the muscles, namely, that in no other place do they find a material suitable to their nourishment. However much this assumption may be justifiable, you must still not forget, gentlemen, that it is by no means proved, and affords material merely for a provisional and elementary hypothesis. In what manner the schizomycetes react upon the walls of the vessels, it has as yet hardly been attempted to explain.

In the case of the putrefaction bacteria and the micrococci, we thought the inflammatory changes produced were due to a chemical decomposition of the fluids of the body dependent on their increase and growth. It may be possible that in the case of the specific germs of the infectious diseases, similar chemical changes are produced in the vascular walls of the parts where the germs are localized. If this be really a fact, if it be indeed true that cerebro-spinal meningitis, for instance, is caused by certain schizomycetes finding their necessary nourishment in the pia mater, and here causing, by their growth and development, such chemical changes that the walls of the capillaries of the pia become altered in their structure, it seems to me we are entitled to look upon the metastatic inflammations and abscesses of pyæmia as a particular subvariety of infectious inflammation, and of such a kind, indeed, which distinguishes itself from all other forms of infectious diseases by the fact that it owes its origin to *fungi which seem to exist everywhere and at all seasons*. In this way we can readily explain that although a wound can, in any part of the world, become infected, or that even erysipelas or pyæmia may appear sporadically, as it is termed, yet that these diseases are also at the same time markedly contagious, as only too many instances have proved. The germs exist everywhere, it is true, but the liability of infection increases, of course, if a wound be brought near a person whose body presents a more than usually rich breeding-ground.

We see, therefore, that the old idea that the infectious diseases might appear in any place or at any time can no longer be maintained; yet, after all, this limitation relates to a point of but very subordinate importance, and which has really as little true connection with the nature of the diseases as their classification into contagious, miasmatic, and miasmatic-contagious. For us, gentlemen, the thing of chief importance, in speaking of infectious diseases, is the parasitic nature of their morbific causes, or, as we may also say, the organized nature of the virus, and we know to-day that, aside from exceptional cases, it depends on the biological peculiarities of these parasitic organisms whether they enter our systems by way of the water we drink, the air we breathe, or from already infected individuals. Since these side issues of the general question have been more closely studied, the number of diseases which can be classed as infectious has, in the last decade, slowly but steadily increased, and many are now reckoned in this group whose true etiology was not even suspected a few years ago. To show you how compatible the present parasitic theory is with the always known clinical history, let me merely bring to your minds a familiar instance. That a coryza—a simple catarrh of the nose or throat or larynx, or, as it is generally called, "a cold"—is quite markedly contagious, has long been recognized by both the public in general and by physicians. Yet how could a disorder having such marked powers of reproduction ever be produced by changes of temperature, wind, rain—in short, atmospheric conditions of any kind? A confirmation of the correctness of our views, of still greater weight, has been furnished us by a more close and critical examination of the anatomical and clinical histories of cases. This has shown that many inflammations, formerly looked upon as independent, are in reality directly connected with infectious diseases. In pleuritis and peritonitis, pathological anatomists have maintained for some time this relation. For many cases of endocarditis and meningitis, too, this view obtained. Quite lately Wagner, of Leipsic, basing his statements on his large clinical experience, has come to the conclusion that the great majority of inflammations of the kidney develop secondarily to some infectious disease which has preceded them. Similar proofs have been given for chronic bone and joint inflammations by Lücke, and for the internal inflammations of the eye by Leber. If you will bear in mind, too, that by the progress of pathological anatomy, certain formerly unexplained inflammations, such as the congenital valvular lesions from intrauterine endocarditis, certain lesions of the spinal cord, etc., have been shown to be of a non-inflammatory nature, it will be at once evident to you that the number of inflammations depending on

inexplicable and incomprehensible causes is rapidly diminishing. If for an etiology of inflammation we are not yet in a position to entirely discard the idea of a *rheuma*, that is, an abnormal condition of the skin or mucous membranes or other organs of the body, produced by atmospheric conditions, it seems to me that the science of medicine is at least on the best way to do so.

ORIGINAL ARTICLES.

THE USE OF CONSTITUTIONAL REMEDIES IN THE TREATMENT OF EAR DISEASES.[1]

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THIRTY years ago Sir William Wilde (then Mr. Wilde), of Dublin, in a chapter devoted to the consideration of otorrhœa, in his excellent work upon Aural Surgery, wrote as follows: "With regard to general treatment, a very remarkable difference seems to exist in this country in relation to the management of the diseases of the eye and the ear; that of the former being of too local a nature, while that of the latter is almost exclusively constitutional. How frequently do we see a case of pustular or rheumatic ophthalmia, with a foul, white, loaded tongue, treated by a caustic solution dropped into the eye, or an astringent lotion applied to the eyelids; while a case of otorrhœa, without any derangement of the digestive functions or general health, is recommended tonics, sea-bathing, blistering, and an issue in the arm."[2]

Sir Wm. Wilde was an eminent teacher, and probably as much as any man aided in shaping the development of modern otology, and it may be that this criticism of his upon the exclusively constitutional treatment of ear diseases prevalent at the time he wrote, produced a more radical effect than he intended. However this may be, if he were with us to-day, I feel quite sure that his complaint would be, not that constitutional remedies are used to the exclusion of local ones in the treatment of ear diseases; but, on the contrary, that with pendulum-like swing, we have gone to the other extreme, and that now upon local means too great reliance is placed, while the value of constitutional treatment is almost lost sight of. For, though this distinguished author inveighed against the neglect of local means in the management of affections of the ear, he was at the same time a firm believer in the value of internal medication, and one may find in a single chapter of his thoroughly practical treatise more said in commendation of constitutional remedies than he will discover between the covers of some of the works upon ear diseases written within the past ten years. It is, indeed, true that much of Wilde's constitutional treatment consisted in what nowadays would be regarded as an unjustifiably free use of mercury; and, although he speaks with abhorrence of the reckless manner in which this drug had been administered twenty years before his day, allusion to very sore mouths occurs with somewhat unpleasant frequency in the reports of his cases. But there *are* conditions in which, I believe, much is to be gained by following his example more closely than we do, even in this particular.

The very recently issued works upon diseases of the ear, by Dr. A. H. Buck,[3] of New York, and Mr. Dalby,[4] of London, may be referred to as affording proof of what I have said as to the slight importance attached to the use of constitutional remedies by recent writers upon diseases of the ear. Dr. Buck, it is true, does not ignore constitutional remedies to the same degree that Mr. Dalby does; nevertheless, he damns them with faint praise in eczema of the auricle; speaks only of quinia, iron, and bark in furuncular inflammation, and of Fowler's solution in diffuse inflammation of the external auditory canal, and says of the latter, he has had too little experience with it to express a decided opinion regarding its efficacy; recommends as "general measures" in middle-ear catarrh nothing except change of air, adequate exercise, attention to the diet and cold sponge-baths, and bromides for the relief of tinnitus; suggests nothing beyond local treatment in acute purulent otitis media but rest and a non-stimulating diet, unless it be due to syphilis, when, in addition, "constitutional remedies" should be administered; mentions only iodide of potassium in deafness due to non-specific disease of the labyrinth, but speaks with favor of the "vigorous antisyphilitic treatment" recommended by Dr. Roosa when the labyrinthine affection is of specific character; and, most noteworthy of all, concludes his exceedingly interesting and instructive chapter upon "Diseases of the Mastoid Process" by devoting six pages to the question of "treatment," *without making one single allusion to internal medication*. One might be disposed to conclude that this failure to speak of anything besides local measures, in considering the treatment of mastoid affections, is the result of an oversight upon the part of the author; but the description given of the treatment adopted in the numerous cases of this character which he reports, renders it probable that such is not the case, but, on the contrary, that it is a true index of his convictions.

This seems the more remarkable, because at least one of the cases related illustrates in a striking manner what, under the most unfavorable circumstances, active constitutional treatment is capable of accomplishing. The case I allude to[1] is that of a little girl, six years of age, in whom alarming cerebral symptoms developed in connection with a severe attack of acute inflammation in the drum of each ear. The inflammation had lasted one week when Dr. Buck was called in. He found the patient slightly delirious, with a temperature of 105° and a pulse of 140. There was almost total deafness, and both tympanal membranes were red and swollen, the right one bulging somewhat superiorly and posteriorly. The mastoid region showed no external signs of disease. Dr. Buck made "a free incision" into the posterior half of each membrane, giving vent to no pus, and prescribed only the warm douche, to be used freely, and poultices. On the following day the child was in a state of partial coma; the temperature had not improved; pulse 140, and feeble; sordes upon the teeth; tongue dry; and no discharge from either ear. Drs. Markoe and James R. Wood were now called in consultation, and at their suggestion "mercury was administered: internally, in the form of calomel in small doses; externally, in the form of inunctions of the oleate of mercury (10 per cent.), frequently repeated. Bromide of potassium was also given, in conjunction with the calomel." The next morning, Dr. Buck goes on to relate, the child was "very much better, an active discharge having established itself in both ears during the night;" and "from this time onward"—as he subsequently learned from her physician—"she made a rapid recovery, and regained her hearing almost perfectly." The lesson which this case teaches is so plain, it seems to me, that he who runs may read. Dr. Buck, however, does not appear to

[1] A paper read before the Clinical Society of Maryland, January 6, 1882.

[2] Practical Observations on Aural Surgery. Philadelphia, 1853, p. 390.

[3] Diagnosis and Treatment of Ear Diseases. New York, 1880.

[4] Diseases and Injuries of Ear. Philadelphia, 1873.

[1] See page 307 of Dr. Buck's book. The case occurred in January, 1876.

have been impressed by it; at least, the method of treatment so successful in this instance was resorted to by him in but one other case,[1] and then only in the last extremity, when from the "advanced stage of the cerebral disease" and the absence of redness and tenderness behind the ear, "it seemed unlikely that any relief would be afforded by the operation of perforating the mastoid process." As may be supposed, the mercurial treatment here, was of no avail, and the patient died two or three days later.

With each succeeding year of experience, I have learned to place a higher estimate upon the value of internal medication in the treatment of diseases of the ear, until at the present day I resort to constitutional remedies with nearly the same frequency, and almost the same confidence in aural, that I do in ophthalmic practice. And here I may remark, in parenthesis, that this result is due in no small degree to my experience in dealing with eye diseases; for, assuredly, nowhere do we find more distinct and convincing proofs of the efficacy of constitutional remedies than in ophthalmic practice.

At the head of the list of remedial agents in which experience has taught me to place confidence in diseases of the ear, I do not hesitate to put the once much abused in practice, and later scarce less abused in precept, drug —*mercury*. It has not been very many years since mercury was freely employed in the treatment of ear diseases. Wilde, as we have seen, used it with great freedom, and Toynbee also prescribed it very often. Of late, however, the tendency has been to resort to it only when there is reason to believe that the local malady is dependent upon or complicated by *syphilis*. "Mercury," says Sir Wm. Wilde, "is the medicine which, of all others, acts most beneficially in diseases of the ears, simply on account of its specific efficacy in arresting or controlling inflammation or removing its products."[2] And if we admit, as I am quite prepared to do, that mercury has such "specific efficacy," we need only call to mind the minute anatomy of the ear—the peculiar character of the membrane, mucous membrane and periosteum, at once, which lines the tympanal cavity and mastoid cells, and of that, fibro-serous in structure, which invests the intricate walls of the labyrinth—to appreciate that here, of all places, in an inflammation involving such structures, a peculiarly favorable field is open for its action.

Of the value of mercury, more especially the bichloride, *in chronic and subacute inflammation of the middle ear*, Wilde speaks in the most positive terms;[3] while Roosa, on the other hand, with equal positiveness condemns its employment under such circumstances, and says, "the time has probably gone by when a person in fair health, suffering from chronic aural catarrh, and who has no constitutional taint, will be treated by alterative doses of the bichloride of mercury, followed by the iodide of potassium."[4] Although I have the highest regard for Dr. Roosa's opinions, and esteem him a thoroughly practical surgeon, I should be extremely sorry to think that the future would verify this prediction of his, for my own experience leads me to endorse heartily the views of Wilde, and to believe *that in giving up mercury we should lose the one remedy which we can least afford to do without*. And I may add that I am also prepared to endorse what he has said in the same connection as to the perfect safety which attends even the long-continued administration of the bichloride of mercury, when it is prescribed in doses proportioned to the susceptibility of the patient. The *biniodide*, however, is the preparation of mercury which I more frequently employ, in both ophthalmic and aural practice. The addition of two grains of iodide of potassium to each grain of the biniodide of mercury renders it freely soluble in water, and in this form I usually prescribe it, giving, according to circumstances—the susceptibility of the patient and the nature of the malady—from $\frac{1}{24}$ or $\frac{1}{12}$ of a grain to $\frac{1}{10}$, $\frac{1}{12}$, $\frac{1}{8}$, or even in some instances $\frac{1}{6}$ of a grain of the mercury salt, three times a day.[1] In deafness due to middle-ear changes, unless I have reason to think the patient will be unusually sensitive to its action, I commonly begin by prescribing $\frac{1}{32}$ or $\frac{1}{24}$ of a grain, to be taken three times a day, after meals; and very often when only slight, or perhaps no appreciable improvement follows its administration in these doses, together with careful local treatment, which should never be neglected (but into the consideration of which the limits of this paper do not permit me to enter), a marked change for the better *does* become manifest *when the dose is increased to* $\frac{1}{10}$ *or perhaps* $\frac{1}{12}$ *of a grain*. Occasionally, in persons who are peculiarly susceptible to the action of iodine, I substitute with advantage, and in similar doses, the *bichloride of mercury* for the biniodide solution; and, on the other hand, I sometimes increase the proportion of iodide of potassium in the latter, so that a full dose of it may be given with the mercury.

The employment of mercury is especially indicated, and its good effects are more manifest in that variety of middle-ear catarrh so frequently encountered, which least deserves to be called *catarrh*, in which the tendency is towards sclerosis and thickening, and in which the fibrous structures of the tympanum are, perhaps, chiefly involved. Often, however, even in true mucous catarrh, we shall accomplish more with it than with any other drug, although in this condition I usually employ, instead, the muriate of ammonia, of which I shall presently speak.

It is, perhaps, scarcely necessary for me to state here, and yet I think it will be more discreet to do so (for there is nothing leads so surely to circumspection, and this to introspection, as a little wholesome criticism), *that I have not confounded syphilitic and non-syphilitic cases of middle-ear disease*, and that what I have said, so far, as to the value of mercury in chronic and subacute tympanal catarrh has reference *only to cases of non-specific character*. When, as we so often find, these middle-ear maladies *are* dependent upon constitutional syphilis, inherited or acquired, then, of course, all that has been said as to the propriety of administering mercury, and the good which it is capable of accomplishing, may be repeated, as to them, with twice the emphasis. In this connection I may state that my uncle, Dr. Alan P. Smith, whose opinion is valuable because of his large experience and habit of observing closely,

[1] Op. cit., p. 320, Case XIV.
[2] Diseases of the Ear, p. 98.
[3] Ibid, p. 210.
[4] Treatise on Diseases of the Ear, New York, 1873, p. 289.

[1] At the present time I have a man (a German, 46 years of age, by occupation a shoemaker) under treatment for neuro-retinitis, who, since November 2, 1881, has taken *every week four grains* of the biniodide of mercury ($\frac{1}{24}$ gr. three times a day) with the happiest effect as regards his vision, and without the slightest disturbance of his general health or interference with his daily occupation. He had been taking strychnia in full doses for some time before coming into my hands in January last; but, according to his report, with no benefit to his sight. He was allowed to continue the strychnia, and, in addition, was given the biniodide, in the solution above described, $\frac{1}{12}$ grain to be taken three times a day. When this treatment was commenced, he could with difficulty decipher words of J. No. 12. Subsequently the dose of biniodide was increased upon several occasions, until, upon the date mentioned, the present quantity was reached. With each increase in the dose (there being no change in the strychnia dose), a more marked improvement in vision became manifest, until at the present time he can make out short words of J. No. 1, and read No. 2 with tolerable fluency. He denies syphilis, and there seems to be no good reason for considering the affection of specific character. This is, in my experience, an instance of exceptional insusceptibility to the action of mercury, although Wilde speaks of giving ¼ grain of the bichloride for "months together" without unpleasant consequences.

tells me that in chronic nasal catarrh, even when it occurs independently of syphilis, he has obtained more satisfactory results from the long-continued administration of small doses of the biniodide of mercury than from any other plan of treatment which he has tried.

In *inflammation involving the nervous apparatus of the ear*, whether of specific or non-specific origin, mercury, in the form of the biniodide is, in my opinion, by far the most valuable remedy that we possess. In opposition to the views of a recent writer upon this subject, I believe that syphilis, both inherited and acquired, *very frequently invades the labyrinth*, although, undoubtedly, the middle ear is at the same time often (but not always) involved. If I were asked to state what, in my opinion, are the most frequent causes of nervous (labyrinthine) deafness, I think I should have no hesitation in answering: first, cerebro-spinal meningitis; next, *syphilis*; and, after that, traumatism. I have not had the good fortune to see any cases of deafness from cerebro-spinal meningitis improve under treatment; possibly some of those which I have met with might have been benefited by mercury if they had been seen at an earlier period. That very much may be accomplished in syphilitic disease of the labyrinth, sometimes even when the deafness is of considerable duration, by the persistent administration of moderate doses of the biniodide of mercury, I have convinced myself in a number of instances. I have also obtained better results from this remedy in Ménière's disease, uncomplicated by syphilis, than from anything else that I have employed.

It is a question in my mind how far the administration of mercury is justifiable *in that form of acute inflammation of the tympanum which, if allowed to run its course unchecked, usually ends in suppuration, in perforation of the drumhead, and in the establishment of a more or less persistent otorrhœa.* Practically, as these cases seldom come into the hands of the specialist until after the period is passed at which this plan of treatment might be resorted to with advantage, he is not often called upon to decide this point. Of course, in this condition, alterative doses of the biniodide or bichloride would be of little avail, and, so far, I have not met with cases in which I have felt called upon to administer calomel or blue mass so as to impress the system. I have, however, given purgative doses of calomel in combination with rhubarb, or with rhubarb and scammony, in acute inflammation of the middle ear with the happiest effect. And I believe that when the inflammation is intense, becoming a *periostitis* rather than a catarrhal inflammation of a mucous membrane, when there is marked constitutional disturbance, and, above all, when symptoms of cerebral irritation make their appearance, I believe, that under these circumstances, considering how great is the danger of meningitis supervening, it is our duty, without loss of time, and in addition to local antiphlogistic treatment (of which the free application of leeches will form a chief part), to bring the patient quickly under the influence of mercury; and this we shall accomplish best by administering at short intervals small doses of calomel, combined, if need be, with opium, and occasionally, perhaps, by supplementing this with inunctions of the oleate or the officinal ointment of mercury. For is it not to be desired rather that the patient should recover, somewhat "pulled down," it may be, by the active treatment he has received, but with a sound ear, than that he should be suffered to die from meningitis or cerebral abscess, or, at best, get over the acute attack with a permanently damaged ear, and a persistent otorrhœa to remind him of what he has gone through with, and to be a standing menace to the integrity of his brain for the rest of his days?

(To be continued.)

ON THE ANTIPYRETIC TREATMENT OF TYPHOID FEVER.

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THE following are the tables referred to in the lecture on the antipyretic treatment of typhoid fever, contained in the first number of the MEDICAL NEWS (January 7, 1882). They embrace the data on which were based the conclusions presented in that lecture. In each table will be found

1. The number of times, during the continuance of the disease, that the different modes of refrigeration, namely, the ice-bath, the sponge-bath, the wet sheet, with sprinkling, were employed.

2. The temperature in the axilla whenever either of these modes was employed.

3. The duration of the employment of each of these modes whenever employed.

4. The temperature in the mouth when the employment, at each time, was concluded.

5. The duration of the antipyretic effect in every instance.

The number of tables, corresponding to the number of cases, is fifteen. It is needless to say that the records made of the cases, and the tabulation of the facts, have required considerable labor, which, it is hoped, will not be without value as data having reference to the antipyretic treatment of typhoid fever.

CASE NO. 1.—RECOVERY.

Modes of Employment of Cold.	Axillary Temperature when Commenced.	Duration of Employment	Temperature in Mouth at Conclusion.	Duration of Antipyretic Effect.
Ice-bath.	105°	1½ hrs.	103¾°	1½ hrs.
"	105°	½ hour.	102°	2 hrs.
"	105°	1½ hrs.	103°	1 hour.
"	105°	½ hour.	102½°	3 hrs.
Sponge-bath.	105°	6 hrs., at intervals.	102 1-5°	Not noted.
Ice-bath.	105¾° in rectum.	Not noted.	Not noted.	Not noted.
Sponge-bath.	104 1-5°	3½ hrs.	102°	1 hour.
"	103 1-5°	1½ hrs.	103 1-5°	Not noted.
"	104°	1 hour.	103¾°	Not noted.
Sponge-bath.	103½°	6 hrs.	102¾°	

Subsequently, in this case, 7 sponge-baths were given on the next day; 7 the next day; 8 the next day, and 5 the next day. After 7 days 32 baths were given in one day, and 2 on the day following. After 21 days, 3 baths were given during one day; 2 daily on the next 3 days, and 3 on the next day. These subsequent baths are not tabulated, for the reason that in many instances the time of their continuance is not noted.

The number of ice-baths given in this case is 5, and the number of sponge-baths 46.

CASE NO. 2.—RECOVERY.

Ice-bath.	103½°	15 minutes.	101°	1½ hours.
"	104°	An hour.	102°, and subsequently in 2½ hrs. 101°	15 hours.
Sponge-bath.	103°	Not noted.	101°. 5 h. after conclusion, 99°	6 hrs. after reduction to 99°
"	102¾°	"	102°	
"	103½°	"	102°	12 hrs. after reduct'n to 102°
"	10[illegible]°	"	101¼°	

In this case, 7 additional sponge-baths were given, the details not having been noted.

The number of ice-baths is 2, and the number of sponge baths is 11.

CASE NO. 3.—FATAL.

Wet sheet.	104°	One hour.	102¼ °. An hr. and a quarter after conclusion 101°, and after another hour 100°.	Four hours.

In this case pneumonic symptoms were present on the day but one following the employment of the wet sheet, and death took place four days afterwards. The temperature rose to 108° on the day of death.

CASE NO. 4.—RECOVERY.

Wet sheet.	103½ °	2 hrs.	103°. An hour and a half after conclusion, 102¼ °; and in 4 hours, 100¾ °.	No rise of temperature except for an hour once during ten days.
"	103½ °	2 hrs.	102½ °	1 hour.
"	103½ °	4 hrs.	102°	48 hours.
"	103½ °	4 hrs.	102½ °	24 hours.
"	103¾ °	4 hrs.	102½ °	No further rise of temperature to 103°.

CASE NO. 5.—RECOVERY.

Wet sheet.	104½ °	4 hours and 45 minutes.	101¾ °	2 hours.
"	105½ °	6 hours.	103½ °	1 hour.
"	105¾ °	6 hours.	104°	Owing to delirium and complaining by the patient, cold not employed for 18 hours.
Sponge-bath.	105°	2 hours.	103¾ °	Afterward the temperature did not call for antipyretic treatment.

CASE NO. 6.—RECOVERY.

Wet sheet.	104¾ °	1 hour.	102¼ °	2 hours.
"	104¾ °	1 hour.	102°	3 hours.
"	104°	2 hours.	102°	1 hour.
"	103¾ °	1 hour.	Not noted.	Not noted.
"	104°	2 hours.	101¼ °	2 hours.
"	104¼ °	1½ hrs.	101¾ °	1½ hrs.
"	105¼ °	2 hrs. and 45 mins.	101½ °	2½ hrs.
"	104°	2 hours.	101½ °	1 hour.
"	103°	50 mins.	102°, and in 2 hrs. after conclusion, 101¼ °.	6½ hrs.
"	103½ °	30 mins.	101¼ °	5 hours.
"	103°	45 mins.	101¾ °	4 hours.
"	103¾ °	25 mins.	101¾ °	2½ hrs.
"	103¾ °	1 hour.	101¼ °	13 hours.
"	103½ °	45 mins.	101¼ °	3 hours.
"	103¾ °	35 mins.	101°	20 hours.
"	103¾ °	40 mins.	101°	5 hours.
"	103¾ °	1 hr. and 25 mins.	101½ °	Subsequently no rise of temperature to 103°.

The wet sheet was employed in this case 13 times.

CASE NO. 7.—RECOVERY.

Wet sheet.	104½ °	20 hours.	103½ °	Wet sheet discontinued, owing to antipathy of patient.
Sponge-bath.	103½ °	6 hours.	102¼ ° in axilla. 14 hours after sponge-bath 101¼ °.	4 hours.
"	103¾ °	Not noted.	Not noted.	Not noted.

In this case the temperature several times afterward rose to 104°, but was always reduced by the sponge-bath.

CASE NO. 8.—FATAL.

Sponge-bath.	104¼ °	30 minutes.	102¾ °	9 hrs. 103¾ °, and 16 hrs. 104°.
"	104 1-5°	20 minutes.	102½ °	9 hrs. 103¾ °, and 18 hrs. the same.
"	103¾ °	20 minutes.	101¼ °	2 hours.
"	104¾ °	20 minutes.	102°	2½ hrs.
"	104½ °	20 minutes.	101¾ °	9 hrs. 103½ °, and 12 hrs. 104°.
"	103½ °			

The patient became comatose, and died on the second day after discontinuance of the antipyretic treatment.

CASE NO. 9.—RECOVERY.

Sponge-bath and rubbing surface with ice for ten minutes.	104⅛ °	1 h. and 10 min.	102°	2 hours.
Sponge-bath.	104°	25 minutes.	Not noted.	3 hours after sponge-bath.
"	104¾ °	45 minutes.	103¾ °	Rubbed with ice immediately.
Rubbing surface with ice.	104⅛ °	101¾ °	101¾ °	2 hours.
Sponge-bath, and rubbing with ice 20 minutes.	103¾ °	30 and 20 min.	101½ °	In 5 hours 103°

In this case, for 5 days after last sponge-bath and rubbing with ice, the temperature was generally under 103°, and cold was not employed. Then the temperature rose to 103½°, and the sponge-bath in 20 minutes reduced it to 102¾°. Subsequently, the sponge-bath was employed 13 times, and the surface repeatedly rubbed with ice, always with reduction of the temperature.

CASE NO. 10.—FATAL.

Sponge-bath.	104¾ °	20 min.	102°	2½ hours.
"	104¾ °	30 min.	No reduction of temperature.	
Wet-sheet.	104¼ °	2 hours.	102½ °	8½ hours.
"	104¼ °	8 hours.	103°	2 hours; temperature 105°; and in 6 hrs. fell to 101°, without any antipyretic treatment. In 5 hrs. rose to 104°, and an hour later to 105°.
Sponge-bath.	105°	1 hour.	102¾ °	6 hours.
"	105°	2 hours.	103°	3 hours.
"	105°	2 hours.	102¼ °	13 hours.
"	104°	3 hours.	102¾ °	3 hours.
"	105°	1½ hrs.	102¾ °	2½ hours the temperature was 105°, and in 1½ hours fell to 102¾ °, without antipyretic treatment. In 36 hours afterward it rose to 104°.
"	104°	1½ hrs.	102¾ °	20 hours.
"	105°	8 hours.	102¾ °	15 hours.
"	105⅛ °	11 hrs.	103°, and 2 hours after 102°.	In 11 hrs. the temperature rose to 105°, and in 4 hours fell to 103¾ °, without antipyretic treatment. In 18 hours rose to 104°. Death 11 hrs. afterward, the temperature remaining at 104°.

CASE NO. 11.—FATAL.

Wet sheet.	104¼°	3 hours.	102¾°	23 hours.
Wet sheet in "Kibbe's cot."	103¾°	1½ hours.	103°	26 hours.
"	103¾°	5 hours.	102¾°	13 hours.
"	103¾°	4½ hours.	102½°	16 hours.
"	103¾°	45 minutes.	102½°	6 hours.
"	103½°	1 hour.	102°	2 hours.
"	103½°	3 hours.	102¼°	5 hours.
"	103¾°	4 hours.	102½°	6 hours.
"	104¼°	7 hours.	102¾°	4 hours.
"	103½°	2½ hours.	102°	5 hours.
"	103¾°	4 hours.	102½°	3 hours.
"	104°	17½ hours.	103°	4½ hours.
"	104¼°	2 hours.	102¾°	3 hours.
"	103¾°	3 hours.	102°	4 hours.
"	104°	3 hours.	102¼°	4 hours.
"	104°	3 hours.	102°	2 hours.
"	103¾°	3 hours.	102½°	4 hours.
"	103¾°	7 hours.	101½°	14 hours.
"	103½°	2 hours.	102°	80 hours.
"	103¾°	1 hour.	102½°	4 hours.
"	104¼°	3 hours.	102½°	4 hours.
"	104°	2 hours.	102¾°	12 hours.
"	103¾°	1 hour.	102¾°	4 hours.
"	104°	3 hours.	103½°	4 hours.
"	103¾°	3 hours.	102°	15 hours.
"	103½°	1 hour.	102½°	Quinia substituted and bath suspended for 24 hrs.
Sponge-bath.	104¼°	2 hours.	102½°	
Sponge-bath and 20 grs. quinia.	104¼°	3 hours.	102°	21 hours.
"	104°	1 hour.	103¾°	
"	103¾°	12 hours.	101½°	12 hours.
Sponge-bath and 15 grs. quinia.	103¾°	2 hours.	102¼°	2 hours.
Sponge-bath and 20 grs. quinia.	103¾°	2 hours.	102¾°	14 hours.
Sponge-bath.	103°	2 hours.	102½°	4 hours.
Sponge-bath and 20 grs. quinia.	104°	1 hour.	103½°	1 hour.
Sponge-bath.	104⅛°	1 hour.	102⅛°	2 hours.
Sponge-bath and 20 grs. quinia.	103⅛°	4 hours.	102¾°	11 hours.
"	103¾°	2 hours.	101°	6 hours.
"	103¾°	9 hours.	102½°	3 hours.
Sponge-bath.	103¾°	1 hour.	103°	3 hours.
Sponge-bath and 20 grs. quinia.	104°	4 hours.	103°	4 hours.
Sponge-bath.	103¾°	2 hours.	103°	6 hours.
Sponge-bath and 20 grs. quinia.	104¾°	3 hours.	103°	3 hours.
Wet sheet in "Kibbe's cot."	104¾°	2 hrs. and 25 minutes.	102¾°	3½ hours.
"	104½°	2 hours.	102½°	8 hours.
Sponge-bath and 15 grs. quinia.	104¼°	1 hour.	103°	3 hours.
Wet sheet in "Kibbe's cot."	104¾°	2 hrs. and 25 minutes.	102¾°	4 hours.
"	104⅛°	2 hours.	102⅛°	3 hours.
"	103⅛°	1 hour.	102¾°	16 hours.
"	103⅛°	4 hours.	102⅛°	

Death took place 4 hours after the last employment of the wet sheet, the temperature just before death being 103°. The wet sheet was employed 32 times and the sponge-bath 17 times.

CASE NO. 12.—RECOVERY.

Sponge-bath.	103⅛°	35 min	102⅛°	2 hours.
"	104°	40 min	103½°, and afterward declined to 99½ (3 hours).	8 hours.
"	105°	1 hour	102°	3 hours.
"	103¾°	45 min	103°, and in 2 hrs. afterward fell to 102¼°.	Subsequently no rise of temperature to 103°.

CASE NO. 13.—RECOVERY.

Sponge-bath.	103⅛°	3 hours.	102°	13 hours.
"	103⅛°	2 hours.	102¼°	9 hours.
"	103°	1 hour.	101⅛°	12 hours.
"	103¾°	3 hours.	102°	2 hours.
Wet sheet.	103¾°	11 hrs.	At end of one hr., 104°; continued for 3 hrs. longer, 102½°; continued for 7 hrs. longer, 102°; and in 1 hour after removal of sheet, 101°.	No further rise of temperature to 103°.

CASE NO. 14.—RECOVERY.

Sponge-bath.	104°	1½ hrs.	105⅛°. The wet-sheet then substituted.	
Wet sheet.	105⅛°	6 hours.	102¾°. 3 hours after removal of sheet, 99¾°.	40 hours.
"	104°	4½ hrs.	102°	No further rise of temperature to 103°.

CASE NO. 15.—RECOVERY.

Wet sheet.	103¾°	10 hours.	At end of 3 hours, 105¾°. In 7 hrs., 102°.	6 hours.
"	103½°	6 hours.	At end of 1 hr., 104°. At end of 10 hrs., 101¾.°	15 hours.
"	103°	1 hr. and 45 min.	102¾°. In 15 min. after removal of sheet, 101¾°.	8 hours.
"	104°	4 hours.	102¾°. In 2 hours after removal of sheet, 101°.	No further rise to 103°.

HOSPITAL NOTES.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

A SERIES OF CASES OF ANEURISM.

(Reported by WILLIAM E. HUGHES, M.D., LATE RESIDENT SURGEON.)

(*Concluded from page 101.*)

CASE IV. *Aneurism of External Carotid Artery.*—Service of Dr. AGNEW. Mrs. Serina M. P., white, æt. thirty-eight; admitted June 25, 1881. Four years before she had received an injury in the neck near the left angle of the jaw, by being thrown from a carriage. The injury apparently consisted of a slight abrasion and contusion, and nothing was thought of it at the time. Three weeks afterwards, a small tumor was felt at the site of the contusion, which, however, gave her no pain or uneasiness. It grew rather rapidly, and soon the characteristic signs of an aneurism became manifest. Two years after the appearance of the aneurism, an artery in the neck (probably from the patient's description of the operation, the external carotid), was ligated, which, for a short time, arrested the pulsation and bruit. They recurred, however, after a short interval, and the tumor continued to grow. A short time before admission she had several hæmorrhages from the mouth, which were easily controlled by the application of styptics to the bleeding points. When admitted, the tumor extended from the ear to the angle of the mouth, measuring eight inches in that direction; had pushed in the cheek; encroaching on the cavity of the mouth, and pressed on the jaws to such an extent as to render the taking of any but liquid food a matter of great difficulty. Pressure on the left common carotid

artery controlled pulsation perfectly. Dr. Agnew tied the left common carotid June 29, 1881. The tissues were found much matted together, as if by previous inflammation, and it was with great difficulty that the vessel could be separated from its sheath. After the ligature had been placed around the common carotid below the omo-hyoid muscle, it was found that pulsation in the aneurism, though lessened, was not entirely controlled. The incision was carried higher, and the trunk of the external carotid bared. In cutting down to the artery, several large veins were opened. Two silk ligatures were passed around the artery; these included the external carotid, the superior thyroid, lingual and facial arteries, and the bleeding veins. This last ligation controlled the pulsation perfectly. For the first three days after the operation, the tumor remained quiet and relaxed, no pulsation or bruit could be detected. There was perceptible lessening of the swollen veins of the forehead, and the measurement from ear to angle of mouth was one-half inch less than it had been. At the end of three days pulsation and bruit became manifest, and it was evident that blood was finding its way into the sac by means of the other carotid and circle of Willis. Pressure on the left carotid no longer controlled the pulsation, but pressure on the right did so perfectly. To exclude the current of blood flowing into the sac through the right common carotid, this vessel was tied by Dr. Agnew, August 6, 1881, thirty-eight days after the ligation of the left. The same matted condition of the tissues was found as was present on the left side of the neck, the superficial arteries were much enlarged, and several of them had to be tied before the carotid was reached. The silk ligature was passed around the artery above the omo-hyoid muscle; it was tightened slowly, several minutes being employed, in order to cut off the supply of blood to the brain as gradually as possible. The patient reacted well; there were no cerebral symptoms manifested, except a partial loss of memory and slight incoherence in the expression of her thoughts. These lasted about three days, when the mind became perfectly clear, after which she complained that objects were not sharply outlined. The failure of vision remained about the same till her death, but was not at all marked. No ophthalmoscopic examination was made. For the first week the tumor remained quiescent; at the end of that time a bruit became audible, very much fainter, however, than the original one. There was no pulsation; the wound did well, the ligature coming away on the twelfth day. The slight bruit persisted though the tumor, diminishing decidedly in size, measured six and a half inches from the ear to the angle of the mouth, and encroached so much less on the mouth, that the jaws could be much more widely separated than before, and solid food taken with ease. On September 4, a small ulcer, apparently aphthous in character, appeared in the mucous membrane of the mouth, over the prominence produced by the aneurism. A few days later, a gush of blood came from this ulcer, but was easily controlled by plugging the cavity with dry lint. On September 9, a much more serious hæmorrhage occurred, but it too was at length controlled by additional plugging. There was no recurrence of hæmorrhage, but four days later a fetid, sanious fluid commenced to ooze through the plugging. The plugging was removed without the occurrence of any hæmorrhage; symptoms of septicæmia set in, and she died September 15, 1881, eighty-four days after the original ligation.

CASE V. *Femoral Aneurism.*—Service of Dr. AGNEW. Joseph M., white, æt. thirty; admitted August 29, 1881. Patient was a moulder, having much heavy lifting to do, and often carrying heavy loads pressing on his groin. He had not had syphilis. About a year before, while pushing a heavy casting, his feet slipped, and something gave way in his left groin. Shortly afterwards, he noticed a small pulsating tumor. On admission, the aneurism had attained quite a large size. It was on the left femoral artery, apparently originating immediately beneath Poupart's ligament, and extending down the leg five inches. The leg was swollen and œdematous, and could be moved only with intense suffering. Owing to the weakened state of the patient, and his inability to endure the pressure of an abdominal tourniquet, ligation of the external iliac artery was determined on. On dissecting down to the artery, Dr. Agnew found that the aneurism had pushed up Poupart's ligament, and had involved the trunk of the external iliac artery for a distance of an inch above the ligament. A carbolized animal ligature was passed around the trunk of the external iliac, and the wound closed. The wound healed by adhesion throughout one-half of its extent, the other half remaining open and suppurating freely. The aneurism remained perfectly quiescent for about a week; at the end of that time, a faint pulsation, but no bruit, appeared, lasting for a few days, when it ceased, and the tumor remained quiet. The swelling of the leg disappeared in the course of two weeks, and the patient was able to move without pain. The wound healed slowly, and is now almost closed. The tumor contracted gradually, the leg below the tumor resumed its natural appearance, and the patient is now practically well. The tumor, however, remains soft, and there may still be some danger of suppuration.

CASE VI. *Femoral Aneurism.*—Service of Dr. ASHHURST. Wm. S. D., colored, letter-carrier, æt. thirty-nine; admitted October 1, 1881. He could not ascribe the origin of the aneurism to any injury; he had not had syphilis. Thirteen months before admission he noticed a small hard lump, about as large as the end of his little finger, at the apex of Scarpa's triangle in the right leg. At first it gave him no trouble, but about four months after its appearance, he began to have slight pain in it, and the leg grew gradually weak, so that he was unable to go on with his employment. On admission, an aneurism, about as large as a small walnut, was found seated on the right femoral artery at the apex of Scarpa's triangle; there was marked pulsation, but no thrill, and only a very indistinct bruit. Pressure on the femoral artery above the aneurism, stopped the pulsation completely, and the tumor became smaller, and very soft and flaccid, showing that there had been little, if any, deposition of laminated clot. The pulsation in the aneurism being thus easily controlled by pressure, it was determined to try digital compression. Pressure on the femoral artery below the origin of the profunda femoris, was commenced in the evening, and continued, uninterruptedly, for ten and a half hours, when a horseshoe tourniquet was substituted for the finger. Pressure by the tourniquet was maintained about twelve hours, when the finger was again resorted to. Digital compression was this time kept up for eight hours (eighteen and a half hours in all), by which time pulsation had ceased, and the tumor was hard and firm. The patient was placed at rest, and all pressure taken off. The tumor remained firm, contracting somewhat, and about three weeks after his admission, the patient was discharged cured.

Remarks.—In looking over the foregoing cases, certain conclusions present themselves. First, as to the etiology. Syphilis was absent in every case, and probably plays a less important rôle in the causation of aneurism than is often claimed for it. In four of the cases (I., III., IV., V.), the origin of the aneurism could be traced distinctly to a local injury to the vessel, while in case VI., it was probably due to some strain or injury received while walking. In case II., the

history was so indefinite as to preclude even a conjecture as to the origin of the aneurism.

As to treatment, the results show that treatment by digital compression is infinitely safer than ligation of the vessel. The two cases (II., VI.) treated by compression recovered rapidly, without an adverse symptom or complication; while of those ligated, two (III., IV.) died and one (V.) recovered. And it does not seem necessary to keep up digital compression unremittingly, but it can be substituted, without much retarding the cure, by pressure made by a tourniquet. Compression, by means of Esmarch's bandage, proved futile in the one case (III.) in which it was tried.

MEDICAL PROGRESS.

Treatment of Goitre by Iodoform.—M. Boéchat has employed iodoform in the treatment of goitre (*Correspondenz, Blatt für Schweizer, Aerzte I., S. 12*): 1. External applications; the author made use of a glycerole of iodoform, which he protects by a coating of collodion. His results were negative in old, cystic, or parenchymetous goitres; in recent goitres, of soft consistence, on the other hand, the tumors diminished more rapidly than with either iodine or iodide of potassium; the odor, however, is a great inconvenience.

2. Internal use of Boéchat prescribed iodoform in pill of ⅙ grain, not to exceed ten daily. This treatment was only made use of in two cases of goitre of long standing, and his results are not stated.

3. Interstitial injections. M. Boéchat has made use of this method in three cases. The first case had had a goitre from infancy; the half of a Pravaz syringeful of a saturated solution of iodoform in ether was injected daily for fifteen days, and although the tumor diminished considerably in size, the treatment had to be abandoned on account of the inflammation produced. In the second case, two injections were sufficient to produce improvement in a case of long standing. In the third case, one of long-standing suppuration was produced without any other change.—*Journ. de Méd. de Paris*, Dec. 24, 1881.

Syphilis of the Heart.—Dr. Mayer (*Prak. Arzt., No. 4*) states that the symptoms of syphilitic affection of the heart are like those of the weakened heart of Stokes, or of chronic diffuse myocarditis. He describes the case of a patient who exhibited the symptoms of cardiac insufficiency without evident valvular disease. He had had syphilis eight or nine years before, periostitis was present in the leg, and the mouth was also affected. Treatment by mercurial inunction and iodide of potassium effected a complete cure.—*Practitioner*, Jan., 1882.

Atropia in Menorrhagia and Hæmoptysis.—Dr. Tacke (*Berliner Wochenschr.*, 1881, No. 6) considers atropia a much more certain remedy in menorrhagia and hæmoptysis than ergot. He was led to apply it in these conditions by injecting it subcutaneously in a woman suffering from eczema, and who had at the same time a profuse menstrual flow. He injected $\frac{1}{100}$ of a grain twice daily for two days. The eczema was greatly benefited, and the menstrual flow was much reduced. He recommends a solution of sulphate of atropia 1 to 1000 of water. Five minims to be injected two or three times a day subcutaneously.—*Practitioner*, Jan., 1882.

Excision of the Tarsal Arch.—Excision of the tarsal arch has been now so often performed for obstinate cases of club-foot, that some material for forming a just appreciation of its value exists. The questions that arise are these: Are there cases of club-foot in which the usual treatment by manipulation fails? If so, is excision of the tarsal arch the best means of dealing with them? Can this operation be wisely substituted for the milder treatment in other simpler cases? As Mr. Hayward insisted at the Clinical Society, there are very few, if any, cases *in children* in which tenotomy and judicious and long-continued after-treatment will not accomplish cure; and we hope to see this operation reserved entirely for adults, in whom the deformity of the bones and other changes have rendered other methods of treatment useless. In patients of the poorer classes, however, there is another consideration to be weighed—that is, time. A successful excision of the arch effects a cure in a few months, while an obstinate case in a child, ten years of age, say, may require as many years of skilful treatment by other means; and when the effect of the treatment is such that a cripple becomes able to compete successfully with his fellows in almost all kinds of labor, the question of time is of serious moment. But in suitable cases it is open to doubt whether the results of this operation are superior to those of Chopart's amputation, which is its alternative, while it would seem that its dangers are greater. Mr. Davy has lost by death one out of seventeen operations, and König has lost one out of three, both patients dying from septicæmia. The danger, then, of excision of the tarsal arch ought effectually to prevent its being substituted for the more general treatment of club-foot in simple cases, even although it cures in a shorter time; and it certainly has not yet been demonstrated that its results are superior to those of amputation, which is safer. It is eminently a case in which a judicial investigation might be expected to do good.—*Lancet*, Dec. 24, 1881.

Malformations in the Region of the Omphalo-mesenteric Duct.—Prof. Roth (Basel) concludes an interesting article (*Virchow's Archiv.*, Bd. 86,) on malformations in the region of the omphalo-mesenteric duct, with the following summary of those hitherto observed:

1. The common *diverticulum ilei* (Meckel) which usually hangs free in the abdomen, but may be found in a hernia or in the folds of the mesentery.

2. The adherent diverticulum; the union, by means of a blind end or a cord, is commonly at the navel, more rarely at other points in the abdomen.

3. The open diverticulum; the orifice being at the navel. It may be surrounded by a small prolapse of the wall, or a red, saccular prominence, or there may be prolapse of the bowel.

4. The diverticulum is the starting point of retention tumors-enterocysts, which may retain a connection with the bowel or be isolated.

Ammoniacal Peptonate of Iron.—To prepare this solution, MM. Jaillet and Quillart recommend the following formula: Dried peptone, 5 grammes; sol. of perchloride of iron, 6 grammes; neutral glycerin, 50 grammes; cherry-laurel water, 150 grammes; water of ammonia, q. s. Dissolve the peptone in 50 c.c. of cherry-laurel water, and then add the glycerin; then dilute the officinal (French) solution of perchloride of iron with 50 c.c. of cherry-laurel water, and mix the two solutions; then add ammonia drop by drop until a flocculent precipitate is formed, which dissolves on a further addition of ammonia. It should, however, be avoided having the ammonia in excess. Finally, add enough cherry-laurel water to bring the mixture up to 200 c.c., which will therefore contain two mgrm. and a half of iron in each Pravatz syringeful.

In these conditions the peptonate of iron has not the styptic taste of the perchloride, and when injected

hypodermically at the body temperature produces neither pain nor inflammation. It is also interesting to notice that the peptonate of iron does not give the reactions of iron with the ordinary reagents.—*Bull. Gén. de Thérapeutique*, Dec. 30, 1881.

THE INDICATIONS FOR TREPHINING IN FRACTURES OF THE CRANIUM.—From an interesting review of this subject, with the study of several cases, M. G. FELIZET concludes:

1. That far from adding to the gravity of a wound of the head, with circumscribed depression and fracture of the internal table, antiseptic trepanning is a perfectly harmless procedure.

2. The operation can only be governed in its execution by rules which vary with the circumstances of the case; it has the advantage of transforming a complex and dangerous wound, and one liable to infection, into a simple, antiseptic wound, and one easily examined. —*Arch. Gén. de Méd.*, Jan., 1882.

PILOCARPINE IN DIPHTHERIA.—From the study of a number of cases, Dr. GREZA FALUDI believes the following conclusions to be warrantable:

1. Pilocarpine, administered internally, is a remedy of incontestable value in diphtheria.

2. Pilocarpine will always be useful in inflammatory affections of the mouth or pharynx, on account of its property of producing excessive salivation. Nevertheless, it does not appear to be superior to chlorate of potash or chloride of iron, and can by no means be regarded as a specific.

3. It is especially of service in light cases of diphtheria when the affection is limited to the buccal and pharyngeal cavities.

4. Unfortunately, it does not prevent the morbid process from invading the larynx and respiratory passages, and then a fatal termination is usually to be expected.

5. When this invasion of the air-passages occurs, then pilocarpine is of no value.

6. When administered to young children, its consecutive depressive effects must not be lost sight of; under such circumstances stimulants should be associated with it.—*Bull. Gén. de Thérapeutique*, Dec. 30, 1881.

LUMBAR COLOTOMY.—At the meeting of the Société de Chirurgie, held December 28, M. TILLAUX stated that he agreed entirely with the opinion of M. Trélat, expressed at a previous meeting, that although a lumbar artificial anus was much more difficult to establish than one in the iliac fossa, it was much less dangerous than the latter, as all danger of peritonitis was avoided, and besides it incommoded the patient less. He also presented a patient on whom he had operated three years previously according to this method, for stricture of the rectum of inflammatory origin. An interesting point in the case was that the patient always experienced a desire to defæcate before the escape of the contents of the bowel, and was able voluntarily to restrain for a time any fæcal evacuation.

M. TRÉLAT also presented a case on whom he had operated a month before for cancer of the rectum; the effects of the operation had now passed off, and the fatal result had undoubtedly been postponed.

M. DEPRÈS stated that he had never seen a case of cancer of the rectum in which this operation could be required, and he had usually no difficulty in passing the entire hand through strictures of the rectum which were inaccessible to the finger. When he finds a case suffering from symptoms of obstruction, he applies a blister to the abdomen, and places the patient in a warm bath, as he cannot comprehend the utility of this operation in patients condemned to die from cancer.

M. LABBÉ said that he had made use of this operation for more than three years, and was more than ever impressed with its value, especially when the artificial anus was established in the lumbar region. He was surprised at the opinion of M. Deprès, for, although without doubt the cancer continued to develop, symptoms of obstruction were removed, pain was relieved, and he believed that life under such circumstances was prolonged for from eighteen months to two years.—*Gaz. Méd. de Paris*, Dec. 31, 1881.

VESICANTS IN PLEURISY.—From a study of six cases, Dr. BONAMY thinks that blistering is too much neglected in the treatment of pleurisy, and he believes that both theory and clinical experience justify its use in the decline of the affection. He suggests that perhaps the increase in the mortality from pleurisy noticed in the last few decades may possibly be attributed to this neglect of a valuable remedy.—*Bull. Gén. de Thérapeutique*, Dec. 30, 1881.

TREATMENT OF PERTUSSIS.—Dr. FORCHHEIMER recommends, as a modification of the treatment suggested by Letzerich, the insufflation of quinia, two parts to one part each of bicarbonate of soda and powdered acacia, the powder being blown into the larynx by an ordinary laryngeal insufflator, three or four times daily. The first effect is to cause a new paroxysm of coughing, but it soon passes off, and the beneficial results are usually evident on the fourth day. He reports ninety-seven cases.—*Amer. Journ. of Obstetrics and Diseases of Women and Children*, Jan., 1882.

ON THE SELECTION OF SUITABLE MEDICINES FOR THE GENERAL TREATMENT OF SYPHILIS.—SIGMUND says (*Wiener Med. Wochenschrift*, Oct. 15, 1881), that the choice of a remedy in syphilis is to be determined on when the symptoms of the general disease are such as to afford sufficient indications for the means to be employed and the mode of its administration. Syphilis frequently runs a mild course and gets better spontaneously. Energetic treatment pursued too soon may be injurious, and is useless, while it is impossible by any treatment to obviate the general disease. At the same time, it is all-essential to devote the utmost care to the primary symptoms, to observe dietetic and hygienic rules, and to pay attention to any concomitant diseased conditions. Specific "antisyphilitic" measures are, in his view, to be first employed in the second stage of the development of syphilis, in the third to fourth month from its commencement.

Agreeably to our present knowledge, the choice must lie between preparations of mercury and iodine. These are now employed in a very different fashion from of old. The therapeutics of syphilis depend more than any other group of diseases on clinical observation, for experiments on animals have resulted, in its case, in little instruction in pathology and pharmacodynamics.

Mercury is to be regarded as the direct, iodine as the indirect, remedy for syphilis. As is well known, one can obtain the removal of its manifestations by the outward application of very simple preparations of the first, and simultaneously can favor the formation and growth of normal tissues. What we so frequently observe with regard to syphilitic products in structures patent to the eye goes on, without doubt, in those lying deeper, especially in the tracts of lymph and blood-vessels. The carriers of syphilis, "the white corpuscles," are destroyed and excreted, healthy red ones become more numerous, and nutrition in general improves. The clinician can so indubitably establish this with respect to the most varied forms of syphilitic products, that a different verdict can only be ascribed,

if expressed, to a defective way of using the remedies; it being distinctly understood that with the medicines all indicated aids to the removal of the disease are to be sedulously employed.

Iodine favors absorption both in and by means of the lymph vessels, and is thus the most powerful remedy in scrofulosis and in rheumatic and gouty dyscrasiæ. It eases the pain like a narcotic; it hinders inflammation and favors sleep; finally, it promotes the excretion of certain metals from the organism, as of mercury. Hence it is remarkably curative when used against the results of its misuse. Its internal exhibition does not permit the conclusion that the syphilitic virus is destroyed by iodine, but merely that the unburdening of the lymph and blood from the elements of the scrofulous, rheumatic, and gouty dyscrasiæ, as from mercury, makes more free the natural tendency of the organism towards recovery, and with this forwards its co-operation for the removal, or at least amelioration, of the syphilitic manifestations. Iodine exerts a plainly rapid influence on the gummata in cases where a complication, in general the scrofulous, exists. This, frequently long latent, is first evoked, even in those apparently robust, by syphilis.

The sedative influence of bromine on the nerve centres, particularly the cerebral, those of the heart, and sexual apparatus, makes it a useful auxiliary in the treatment of the syphilitic, although itself possessing no direct power over the dyscrasia.

Mild forms of syphilis disappear under the use of pilocarpine subcutaneously more rapidly than when treated by the expectant method, and severer improve. By its use alone, however, we do not obtain permanent cures, while its continued employment in increasing doses acts unfavorably on the health of the patient.

In the contest between mercurialists and anti-mercurialists which has been waged for four hundred years, were humanity and knowledge alone the motives in such a dispute, the public, the patient, and the medical man (too often difficultly placed as regards the latter) would all be gainers.—*Edin. Med. Journ.*, Jan., 1882.

ABSORPTION OF VIRUS FROM THE SURFACE OF WOUNDS.—At the meeting of the Académie des Sciences on December 22, 1881, M. DAVAINE read an interesting article on this important subject. Any exact knowledge as to the time in which cauterization must be practised to prevent absorption cannot but be of great value, as one may well hesitate to cause useless suffering by a tardy cauterization, or to expose the patient by a too prolonged expective treatment to the dangers of infection. The experiments of Renault on the poison of glanders, and those of Colin on anthrax, demonstrated that absorption from a subcutaneous punctured wound is extremely rapid, and that cauterization was useless when performed later than ten or twenty minutes after inoculation. M. Davaine, however, shows that certain characters of the wound may serve to delay the rapidity of absorption. Having placed material from a case of anthrax on the surface of wounds produced in rabbits by vesicants, friction with rough surfaces, or the removal of a small piece of skin, he found that many animals survived when the wound was cauterized with caustic potassa one, two, or even three hours afterwards. M. Davaine suggests as an anatomical explanation that in a sub-epidermic wound a number of small vessels are divided and the circulation is maintained by the collateral branches which are given off immediately below the divided vessel, and by this the poison, which has penetrated into the interior of a wounded vessel, reaches the general circulation. In a more extensive wound even the collateral branches will be largely destroyed and this direct entrance of the poison into the circulation will be retarded. Therefore, even though punctured wounds are the most dangerous, it seems prudent to cauterize infected wounds even if several hours have passed from the time that they were inflicted.

It may be noticed that the above results do not deal with the wounds inflicted by bites, although they apply closely to wounds such as a surgeon would be apt to inflict on himself with a knife. No allusion is made to the use of the hot iron, the cautery which would naturally suggest itself, M. Davaine having only made use of sulphuric acid and Vienna paste. It is to be hoped that this line of research will be extended.—*Gaz. Méd. de Paris*, Dec. 24, 1881.

CURE OF DEAF-MUTISM.—Two cases of deaf-mutism observed in young children, who recovered their hearing sufficiently for them to learn to talk, furnished M. BOUCHERON with the subject of a memoir, which he read at the meeting of the Société de Médecine de Paris, on October 8, 1881. The first case was in a child two and a half years old; the second, four and a half years old; both had strong constitutions and quick intelligence, never having had convulsions, and of healthy parents. In the first case M. Boucheron diagnosed pharyngeal catarrh, propagated by the Eustachian tube to the tympanum, the tube, later, being obliterated by the swelling of its mucous membrane. After one year the child was able to hear loud talking, and was able to pronounce very distinctly the words which it learned without paying any attention to the movements of the lips. The diagnosis was the same in the second case, who partially recovered hearing in a month, and after five months was able to pronounce the words which were heard. M. Boucheron compared the mechanism in the case of these deaf-mutes by compression of the auditory nerve to blindness produced by compression of the optic nerve in glaucoma, and proposed to designate the process by the term *otopiesis*. He thinks that this idea will suggest the line of treatment to be recommended, viz., the inflation of the tympanum by a catheter introduced during anæsthesia and the reduction of the pharyngeal inflammation by astringents.—*L' Union Méd.*, Dec. 25, 1881.

PALLIATIVE TREATMENT OF ATRESIA VAGINÆ.—Dr. A. F. ERICH reports a case of atresia vaginæ where an operation was positively refused. Menstrual molimina occurred at the age of fifteen. The abdomen began to enlarge, and she suffered intensely at every menstrual period, requiring large doses of morphia to control the pain. She had been under Dr. Erich's treatment for three years now, and requires no morphia at all. About a week before the beginning of the menstrual period she begins taking half-drachm doses of potassium bromide, three times a day. This reduces the hyperæmia, and so limits the amount of blood thrown out during menstruation. In the inter-menstrual period so much of the fluid portion of the blood is absorbed as to keep the tumor from enlarging, or slightly to decrease its size. She suffers at her menstrual periods no more than many women who consider themselves perfectly well. Dr. Erich suggests the further testing of this treatment in such cases.—*Atlanta Med. Register*, Nov., 1881.

LOSS OF SIGHT IN YELLOW FEVER.—In the *Archives of Ophthalmology*, for December, 1881, Dr. JUAN SANTOS FERNANDEZ reports three cases in which there was complete amaurosis in the course of yellow fever; in the only case in which an ophthalmoscopic examination was made, no abnormal condition was detected. He was also able to confirm the external changes known to occur in the cornea and conjunctiva, but the existence of amaurosis, which may be only temporary, has not been before reported.

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PREVENTION OF CONTAGIOUS DISEASES.

GRADUALLY but steadily the conviction has been gaining ground that diphtheria, like scarlet-fever and similar diseases, is communicable from person to person, either directly as, for example, in the notable case of a member of one of the royal families of Europe; or through the medium of the air, or of various substances which have come in contact with the products of the disease. Instances have been cited which seem to indicate that milk has sometimes been the vehicle of introducing the poison into the system.

The fact of the contagiousness of this disease, however well established it may appear to be to the medical profession, is not sufficiently well understood by the general public, especially in its relations to the employment of the proper means of prophylaxis. Hence, one of the chief causes of failure in the successful application of measures designed for modifying, checking, or preventing the progress of epidemics of infectious diseases, is the want of the intelligent co-operation of the public, springing mainly from ignorance of the nature of these affections, their mode of propagation, and particularly of the course to pursue to prevent their spread. Every medical officer of health will corroborate this statement by his experience in numberless cases where the grossest ignorance of the plainest sanitary preventive measures has well-nigh thwarted his best-directed efforts to protect the public health. The experience of every physician bears evidence in the same direction.

It must be admitted that without plainly instructing the people in relation to the preventive management of contagious diseases, and, as inseparably connected therewith, in their duties to themselves, their families, and to the public, satisfactory progress cannot be expected in the work of restricting and intercepting the propagation of these affections, which, though in a great measure preventable, are constantly making their presence seriously felt in every community. Sanitary laws and ordinances are eminently proper and absolutely necessary, but though well conceived in the first place, and well understood by the sanitary authorities, they fail or are only partially effective in their application, unless the people are made familiar with their meaning and objects, and are instructed by plain rules in their obligations and duties.

As a medium of imparting this information, physicians hold no secondary position, and in this relation sustain a very weighty responsibility to society. Their early information of the case—almost invariably in advance of that obtained by the health officer—affords an occasion and advantage of vital importance for promptly instituting decisive measures. Even when there exists only a suspicion as to the nature of the disease, which may scarcely justify a report to the proper authorities, the exercise of the utmost caution and foresight will not be unproductive of good, especially should the subsequent development of the case confirm this suspicion. Their opportunities for directing and controlling the proper protective measures are at all times specially prominent. Their relations to the family enable them to exert a more than ordinary influence in this sphere of action. Their co-operation with the health authorities is of the greatest value in their efforts to compel observance of the salutary provisions of the health ordinances. The physician cannot divest himself of this additional and weighty responsibility, and the more fully he realizes it, the better fitted will he be to discharge the duties of his high office.

However valuable and indispensable the services of the medical profession, either in the capacity of medical advisers or as private citizens, may be in the dissemination of useful information upon important sanitary topics, there is still great need of a more general, comprehensive, and systematic means of educating the masses of population in this special knowledge, particularly in respect to the requirements of preventive medicine. Plain, systematic, authoritative instruction in the details of the management of contagious cases, should be imparted to every responsible member of the community, and this should emanate from the board of health or sanitary council. There is no better or more suitable method of carrying out this aim than by the use of circulars, describing in plain and unmistakable language the chief features of domestic sanitation and

its relations to public health, and the precautions necessary to observe in all diseases dangerous to the community. These circulars should have the widest distribution, and should form the invariable guide when cases of disease occur. Several American local and State boards of health—notably that of Michigan—have adopted this plan, in several instances, with fruitful results; but the method is capable of more general application than it has yet received, and, happily for the future, this conclusion is beginning to be more fully realized.

These tracts would be specially valuable in the hands of the physician, as they could either take the place of or supplement his advice, and being authoritative would be more likely to command observance, especially after they had received his endorsement. Their convenience, where it may be difficult to communicate verbally all the details of management affecting the family and society understandingly, is at once apparent; so, likewise, in cases where there is intelligence and willingness, but where all the minutiæ have not been explained or comprehended, and therefore have failed to be carried into operation.

But the prominent object is to instruct the public—not simply those employed immediately about and associated with the sick—so that they shall at all times be prepared for any emergency, and be able to judge intelligently of the proper course to pursue. It is also to foster a healthy popular sentiment against the infringement of sanitary protective law, based upon a clear conception of its meaning and importance. Books of a class of which the Health Primers are a type are exerting a good influence in this same direction, by disseminating sound, practical information on subjects that so intimately concern the public. The American Public Health Association is another valuable agency for spreading knowledge upon important sanitary topics. Through its members, who are now located in every part of the country, an impetus could and should be given to domestic sanitation in its various branches. Journals devoted solely or in part to the subject of public health are also an efficient instrumentality for the diffusion of useful knowledge, and their prosperity is an evidence of the existence of a public want, and of an appreciation of the effort made to meet it. The capability and special fitness of the medical press for rendering a fruitful service in the sphere of public instruction is not lost sight of, and the appreciation of its high office and grand function of unfolding the laws and teaching the principles of hygiene—the prevention of diseases—first to the profession and through them to the multitudes, is evinced by the custom with every journal of repute of regularly devoting a considerable space to the presentation and discussion of this subject.

OUR NATIONAL MEDICAL MUSEUM AND LIBRARY AND THEIR DANGER.

THE Surgeon-General of the Army has sent to Congress, through the Secretary of War, a special estimate for $300,000 for the purchase of a site in Washington, and the erection thereon of a fire-proof building, to contain the Records, Library, and Museum of his Department. This estimate is accompanied by plans of the building proposed, which is recommended to be of brick, and to be a plain, substantial, thoroughly fire-proof building. The estimate and plans are now before the Committees on Public Buildings and Grounds, in the House and Senate respectively, and it is highly desirable that these committees shall be informed of the opinions of those competent to judge as to the value of these collections and the necessity for a new building in which to store and arrange them so as to secure their preservation and greatest utility.

As to the value of the collections there cannot be a shadow of doubt; they are of national importance, and their value to medical writers and teachers, to those interested in sanitary matters, to medico-legal experts, and to scientific men of all branches cannot be estimated in money.

The library is the largest, and in every way the most valuable, of any collection of its kind in the world. The Museum contains 22,000 specimens, and is unique in the completeness with which it illustrates military surgery and the diseases of armies.

The Records consist of over 16,000 bound volumes of manuscript hospital records with a large mass of papers, including the medical records of our late war. The propriety of a reasonable expenditure on the part of the Government to secure the permanent preservation of these treasures and to make them accessible to those who wish to consult them surely requires no argument. And although the medical profession is especially interested in this matter, every man who is interested in the progress of medicine and the skill of physicians (and who is not?) should be equally interested.

These records, books, and specimens, are now contained in a building which is not fire-proof—which is unsafe as to its mere stability—which is insufficient not only for their proper arrangement, but even for satisfactory storage. It is surrounded by houses and sheds which are very inflammable and which are in immediate contact with its wings. The danger from fire is really a very serious and urgent one.

The accommodations for the officers and clerks are so limited as to cause serious inconvenience, and it needs but half an hour's inspection to convince any one that relief should be given as soon as possible.

We give elsewhere a list of the members of the committees on Public Buildings and Grounds, both for the House and the Senate, and we strongly advise those of our readers who have the personal acquaintance of any of these gentlemen to write to them at once and tell them what is thought about this matter.

More than this, we advise those who know any Senator or Member of Congress to take an early occasion to express their views on this subject and urge that the necessary legislation be passed to permit of the commencement of work during the coming summer. In this matter delays are dangerous.

RESECTION OF THE LUNG.

IN the MEDICAL NEWS for January 7, 1882, we called attention to the improvement in the method of treatment of localized pulmonary cavities by injection and drainage. We now find that attempts to extend this principle of surgical interference have been carried to the greatest length, as is seen in the number of attempts which have recently been made in Germany and France to demonstrate the possibility of partial excision of the lung without a necessarily fatal result. Dr. BLOCK and Dr. SCHMID, in the *Deutsche Med. Wochen.* for November 19, 1881; Dr. GLUCK, in the same journal for December 3, 1881; and M. MARCUS, in the *Gazette Méd. de Paris*, December 3, 1881, each report several instances in which they succeeded in removing portions of the lung in dogs and rabbits, the animals recovering from the operation, and in one case living as long as a year without apparent inconvenience from the mutilation. Schmid, indeed, reports one case in which he first excised successfully a portion of the right lung, and then six weeks later of the left; and he states that he intends to remove an entire lobe from the same dog in order to determine whether adhesions will increase the difficulty of the operation. Dr. Gluck, after satisfying himself of the feasibility of partial excision, and of the fact that ligation of the root of one lung did not necessarily produce fatal œdema of the other, attempted the removal of an entire lung in six dogs and fourteen rabbits. Of these, all but two died of pleuropericarditis, with fibrinous exudation. Two rabbits, however, survived without having shown any febrile reaction, only a transitory dyspnœa and no pulmonary œdema; and three months after the operation they were apparently in perfect health.

Dr. Block, who also, after numerous attempts, succeeded in a partial excision of the lung, states that the portion of the lung remaining expands sufficiently to fill the space occupied previously by the part removed, and that in successful cases no defect in respiratory murmur can be distinguished anywhere over the chest. He believes that this operation is destined to be generally performed in the majority of phthisical cases, gangrene of the lung, etc., as by it the patients not only are freed from the diseased organ, but receive a new, healthy lung in its place.

While these experiments may show that surgical interference with pulmonary disease is not so far removed from feasibility as generally supposed, and that pulmonary herniæ may perhaps with safety be excised, we can hardly conceive of any one foolhardy enough to act on the suggestion of Dr. Block and attempt the excision of a tubercular pulmonary apex.

VACCINATION.

THERE is no graver responsibility resting upon the medical profession than that which is involved in the question of vaccination. After a long and successful reign, the belief is again being fully investigated, both by the public and the profession, is vaccination as fully protective against small-pox as it was once thought to be? The question admits of an easy and most decided answer—that there exists no particle of evidence that a recent properly performed vaccination is in any degree less of a safeguard against variola than it has always been claimed to be. If this dogmatic assertion is true, and it cannot successfully be assailed, it is incumbent upon us to account for the fact that cases of variola have been observed in the persons of those who have been recently vaccinated. But this fact will present no difficulty to those who have observed the carelessness with which the operation has been done, and the character of the virus used in many cases.

The occurrence of an almost infinitely minute proportion of cases in which syphilis has been said to be conveyed by vaccination, has led to a most unfounded prejudice against humanized virus, and has made its employment often impossible, although most excellent authorities, and some of them those possessing the largest experience, rely upon it to the exclusion of all other, as more regular, more rapid in its course, and equally efficient.

It is just here that the duty of the profession to the public is afforded a most important field to labor in. Where from prejudice, fashion, or any other reason it is necessary to resort to bovine virus, if the same caution is used in the selection of that virus as is bestowed upon that of a crust from the human arm, quite as efficient protection will attend the performance of the operation.

The pedigree of the virus, that of the animals from which it was procured, and upon which it is propagated, and the amount of dilution to which it is subjected before being placed in the market, are all points which should receive the closest attention. Indeed, our representative medical societies can do

no better work than to carefully examine and report upon the system pursued, and the painstaking care bestowed upon the business, in the numerous "vaccine farms" which so loudly claim the patronage and endorsement of the profession.

Upon individual members of the profession rests the responsibility of so carefully performing the operation, and so critically scanning its results, that the public will cease to regard it as a simple mechanical procedure which can be successfully practised by any one who becomes possessed of a "point." When the same conscientious care is bestowed upon vaccination, as was formerly done by our predecessors, we may expect to see the same efficiency in its results, and the public will be ready to recognize its value by a suitable honorarium.

When vaccination is carefully performed, and practitioners refuse to recognize any case as being successfully revaccinated until certain specific results are obtained, altogether independent of the question of soreness, we shall cease to hear of variola appearing after a recent vaccination.

One of the chief objections encountered by the advocates of compulsory vaccination, and, indeed, almost the only cause for opposition to it among educated people, is the possibility of the transmission of syphilis by its means. As animal lymph has been shown to have equal protective power with the humanized lymph, and as horned cattle are known, on the authority of MM. Depaul and Ricord, not to be liable to syphilis, this obstacle was largely removed, but now the question of the possible communication of other diseases from cattle to man is being raised. We are told, however, by Dr. Dompeling, the director of the Utrecht vaccination station, that veterinarians in Europe are of the opinion that the diseases of calves and heifers are, on the one hand, not transmissible, and on the other, have such distinctive characters as to be easily recognized and avoided. Dr. Creighton, of Cambridge, is, however, convinced from numerous experiments that it is possible to propagate tubercle from one species to another, and, although his views are combatted by such authorities as Drs. Günther, Thudicum, Carpenter, and others, he yet undoubtedly brings forward strong presumptive evidences of the truth of his statements. At Utrecht the *parc vaccinogène*, or "vaccine farm," is an annex of the veterinary school, and Mr. Ernest Hart, who opened the discussion on this subject at the late meeting of the British Medical Association, is of the opinion that to render precaution complete, it would be serviceable to have a veterinary surgeon attached to every such institution, thus ensuring the genuineness of the lymph, and its freedom from noxious qualities.

DARWINISM IN MEDICAL APPOINTMENTS.

THE doctrine of heredity is one of the most interesting offshoots of the Darwinian speculations, and is capable, when it shall be thoroughly investigated by accurate observers, of throwing much light on many obscure points in the social organization, as well as in the animal world. It is true that in its applications to dynastic succession the result has not always been happy, according to current historical beliefs. Still, this may be owing to the prejudices of partial or mendacious chroniclers, and further investigation may show the current notions to be erroneous, as in the case of Henry VIII., whom Mr. Froude has demonstrated to have been a model husband, or of Lucrezia Borgia, whom a learned German has proved to have been a pattern of all womanly virtues.

Our attention has recently been called to a new development of the truths of heredity, quite as convincing as the fact that the domesticated dog will always turn round once before lying down establishes his descent from the wild animal, which was obliged to take this precaution to insure that his rest would not be rudely disturbed. For the benefit of science, therefore, we are glad to be able to announce the generalization from the isolated observations of several very wise governing boards, that the qualities which render a man well fitted for the duties of a medical teacher or of a hospital physician, and acquire for him just reputation, are transmissible to his offspring. Even the experience which is requisite to the safety of the indigent sick, who seek the hospital bed as a last resort in the struggle for life, comes by inheritance, as well as the faculty for imparting instruction on which the student depends for his success in the profession, on which he has staked his career.

Any one who may entertain the old-fashioned notion that an appointment to a professorship or to a hospital position should be a recognition of professional eminence or of ascertained fitness should hasten to clear his mind of such conservatism; it may now be fairly conceded that the theory is established that an applicant's claim to so important a position must no longer be based on aptitude, long training, experience, and reputation, but on his ancestors, since talent is hereditary and special characteristics are developed by the devotion of several generations to the same pursuit. By a judicious system of intermarriage it is believed that these hereditary excellences may be still further intensified. Indeed, there is no telling to what extraordinary official merit this fact of heredity may lead, or how widely its application may extend, if only the vulgar prejudice in favor of proved capacity can be excluded permanently from the minds of trustees and hospital managers.

We trust that no uncharitable observations by disappointed aspirants will be permitted to obscure the brilliancy of this useful addition to our store of scientific observation. Perhaps not the least of the subsidiary benefits which it will confer will be to release the boards of all our institutions from the harassing canvasses to which they have heretofore been subjected. When we recall the perplexing care with which a conscientious manager or trustee would weigh the qualifications of the several candidates, in order to discharge the very important duty involved in his trust, of selecting among numerous prominent and capable competitors the one best fitted to bear the tremendous responsibilities of the position, we recognize fully the relief which will hereafter be experienced when it is necessary only to ask if a man be the son of his father, without troublesome inquiries as to his age, color, or previous condition of servitude.

THE INFECTIOUS CAUSES OF INFLAMMATION.

WE ask attention with peculiar pleasure to the lectures of Cohnheim on the infective causes of inflammation, which appear in this, and the number of the NEWS for January 21. These lectures are furnished us by the courtesy of their author, and they will be embodied in the forthcoming new edition of his *Allgemeine Pathologie*. Our readers are, therefore, enabled to see these important observations in advance of their publication elsewhere. The existence of a *contagium vivum* is strongly supported. All infectious diseases originate from a parasitic organism. The observations of Koch on the life-history of the *bacillus anthracis*, threw a strong light on the nature of these bodies, and on their mode of reproduction. Prof. Cohnheim maintains the view that there is a special organism for each form of infective inflammation, and he traces the changes in the walls of the vessels to *schizomycetes*. But our readers will, we doubt not, read these lectures of the master, and hence we proceed no further in our analysis of them.

HIDING SMALL-POX.

THE recent action of the Philadelphia Board of Health in censuring a homœopathic practitioner of medicine for not duly reporting a case of small-pox, calls attention to the startling dangers that attend every case unless the utmost care is taken to prevent the spread of the disease. It is stated that in this case there was a funeral attended by forty or fifty persons and that neither the clergyman who conducted the services, nor the friends who were present were informed of the nature of the disease. None of these persons took, therefore, any precautions against it. The friends and servants who nursed and attended the patient, were kept in ignorance of the true nature of her disease. One of the latter, who had not been revaccinated, contracted the small-pox. Her case was promptly reported to the Board of Health by a regular physician who was called in to attend her, and the arrival of the ambulance to convey her to the small-pox hospital, where she subsequently died, was the first intimation that the boarders had of the existence of the disease in their midst.

Subsequently, when the true nature of the disease became known, at least one large school was closed because some of the teachers had been unknowingly exposed to the disease as boarders in the house in which the cases occurred.

It is not made the legal duty of the physician, under the rules of the Board of Health, to inform the occupants of a boarding-house of any case of small-pox which may break out in it nor to see that they are vaccinated, but surely, both from a prophylactic and a moral standpoint, it is his duty to do so, whatever may be the detriment to the mistress of the house or the inconvenience to the boarders.

We know also that not a few physicians neglect to report contagious diseases, other than small-pox, in spite of the positive legal obligations to do so, and we direct attention anew to the law for the purpose of urging obedience to its just requirements.

The addition to the later blanks in red ink at the foot requiring the physician to report whether he has forbidden the children of the family to attend school or other places of public resort is also a matter of prime importance, especially at this time.

It is high time also that, by law, funerals in all cases of contagious disease be made private, and published notice be given of the cause of death.

The reports just received from Mt. Carmel and Gratz, given in another column, afford additional evidence, if it be needed, of the necessity of stringent laws and their strict enforcement, for the prevention of the spread of contagious diseases.

REVIEWS.

DIE FUNKTION DER BOGENGÄNGE DES OHRLABYRINTHS. Von Dr. BENNO BAGINSKI. Berlin: Pamphlet, pp. 9.
THE FUNCTION OF THE SEMICIRCULAR CANALS. By Dr. BENNO BAGINSKI.

The obscurity associated with Menières disease from a pathological point of view renders any facts relating to the functions of the semicircular canals of the greatest interest. Among the numerous theories proposed to explain the mode of production of the peculiar movements which follow mutilation of these organs, there is probably none which has been demonstrated with any degree of certainty. The theory which has been most generally accepted is that disturbances in the pressure of the endolymph are accountable, and an experiment of Munk of increasing the tympanitic pressure, and consequently the labyrinthine pressure, by injecting fluid into the tympanum is often quoted in its support. Dr.

Baginski has, however, found that these effects are only produced when the pressure is increased sufficiently to rupture the membrane of the round window, by which means the fluid is permitted to penetrate to the brain through the communication of the aqueductus cochleæ with the scala tympani, and the latter with the sub-meningeal space. In all cases where the movements followed, it was found that inflammation or hæmorrhage was produced in the neighboring parts of the brain, and that the rapidity with which the symptoms appeared, and their severity, was proportionate to the irritating qualities of, and pressure exerted by, the injected fluid.

It will be recollected that irritation of the portion of the corpus restiforme, which lies immediately under the jugular fossa, has been found by Magendie, Schiff, and others, to cause analogous results, and Dr. Baginski points out that in both cases we probably have a similar mechanism, with the addition, in the case of the injections, of a labyrinthine irritation. To eliminate the value of the latter, Dr. Baginski employed the method of Heidenhain of removing a portion of the bulla ossea by which the canals are directly reached, and he found that dogs in whom portions of the bony labyrinth are removed became perfectly deaf, but showed no disturbances of equilibrium when the brain remained uninjured, even though the entire labyrinth underwent fatty degeneration. When, on the other hand, an entire semicircular canal was removed then the disturbance appeared, but could be directly traced to an inflammatory condition of the brain.

The author shows that a similar mechanism explains the losses of equilibrium in birds after injury of the canals, and denies there being any relationship between the location or direction of the canal injured and the character of the resultant motion. He concludes that whatever may be the function of the labyrinth, it is not for the purpose of serving "an equilibrium sense," and it is probable that the gross lesions of the semicircular canals in the rare cases of Menières disease, which have been carefully studied, have been associated with less evident lesions of the adjoining parts of the brain.

CORRESPONDENCE.

HYPERMETROPIA IN THE PUBLIC-SCHOOL CHILDREN.

To the Editor of the MEDICAL NEWS:

SIR: The correspondence columns of your last issue, page 113, contain a communication from Dr. Loring, of New York, criticising the report of Dr. Risley "On Weak Eyes in the Public Schools of Philadelphia." Taking hold of the loose statement as to "*all foreign statistics*," the writer endeavors to show that the percentage of hypermetropia found by foreign observers is in close accord with his own investigations, which he seems to think have been assailed: and he thus tries not only to convict Dr. Risley of great inaccuracy in his quotation, but also to throw doubt on the value of his entire work. By the sweeping "*all*" thus inadvisedly used, were evidently meant all which were in any way comparable in extent and thoroughness. As to this, Dr. Loring himself says as introductory to his own statistics (*Trans. International Medical Congress, Philadelphia*, 1876, p. 929): "I choose these" (Erismann's and Conrad's) "as examples, since they are the only ones which I know of where sufficient numbers were used, and where at the same time the conditions of investigation were the same, or nearly the same, in each. Thus they are all upon the eyes of school children between the ages of six and twenty-one years, and the trial-glasses and Snellen's type at twenty feet were the basis of examination."

The array of authorities which he cites would generally seem, at first glance, to bear him out most completely in his criticism; but an examination of the table in which Emmert summarizes these same results (and from which Dr. Loring seems to have taken his table), shows several important facts. Cohn, Erismann, Hoffmann, Gayat, Conrad, and Pflüger, are the only ones of the fifteen whose figures reach one thousand scholars. Of Cohn's work, Dr. Loring has said (*loc. cit.*) "but unfortunately Cohn's statistics, extensive as they are, are not suitable for our purpose; since from the manner in which they were compiled, no correct idea can be obtained from them of the frequency with which, in comparison to each other, the three different classes of refraction occur." Were this all as to Cohn's figures, they might pass; but while Dr. Loring quotes his two studies giving percentages of 2.3 per cent. and 7 per cent. respectively, he omits his examination *under atropia*, where the percentage of hypermetropia was *over 88 per cent.*—an omission no doubt accidental.

Gayat, among 1588 pupils, found hypermetropia *manifest* among only 6.8 per cent. Conrad, whose statistics Dr. Risley excepted through a mistake, found with the ophthalmoscope 70 per cent. of hypermetropes among the children of six and eight years of age, while his lowest figures were 23 per cent., and the average among his 1518 scholars must be above 50 per cent. (the full figures are not at hand). Yet Conrad's percentage is quoted by Dr. Loring at 11.76 per cent.—his showing in reality of the manifest, not the total hypermetropia, which Dr. Risley has evidently sought. Erismann and Pflüger, whose 6206 scholars make up more than half of the list Dr. Loring cites (Cohn omitted), give 43.3 per cent. and 44 per cent. respectively; while Emmert, whose figures are entirely ignored, although his summary of the work of others has apparently been employed, found among 2148 scholars 77 per cent. of hypermetropes.

The other investigators of Dr. Loring's list examined numbers of pupils varying from 122 to 800; yet the percentages thus obtained, and representing in almost all cases only the hypermetropia manifest revealed by the test of trial-glasses, Dr. Loring puts on the same footing as that derived from Erismann's 4300 pupils—a proceeding manifestly too unjust to need further comment.

Summing up the work of those whom Dr. Loring cites, excluding Cohn (and many others would be as rightly excluded for the reasons above given by Dr. Loring himself), and adding the work of Emmert, we find that 14,622 scholars in the various schools, gymnasia, and universities, were examined, and 5094, or 28.7 per cent. of them found to be hypermetropic—just double the figures given by Dr. Loring. Remembering the fact set forth by Dr. Risley and many others, that the test by trial-glasses and Snellen's type at twenty feet is quite inadequate to show more than a fraction of the total hypermetropia (Conrad found by the glasses only 16 per cent., and 70 per cent. by the ophthalmoscope, at eight years), and that only in a few of the examinations was this latter means employed at all—we have the fullest corroboration of Dr. Risley's results.

To cite a few examples: Cohn among 240 pupils *under atropia* found hypermetropia in more than 88 per cent.; Emmert among 1884 eyes of pupils between the ages of ten and thirteen, inclusive, found 80.6 per cent. hypermetropic. Erismann among the 59 pupils of his lowest grade found 67 per cent. hypermetropic and 55 per cent. among the 783 of his second; while Dr. Roosa, quoting his paper, says, "Erismann states that under atropia it is probable that there would be a larger percentage of hypermetropia than he found, and

that the hyperopic eye is probably the normal one in youth." (*Trans. Am. Ophthal. Soc.*, Vol. ii., p. 385). Compare these with Dr. Risley's figures and his 74 per cent. does not, at all events, stand alone; while a hasty study of the methods of examination employed in other published investigations, fails to show that anywhere the same thoroughness and precaution were used, Dr. Loring to the contrary notwithstanding. It may be that the proportion of hypermetropic children in the schools of New York City does not exceed an average of 13 per cent.; but I fear that any remark from an outsider as to the New Yorker's lack of far-sightedness would rouse an indignant rejoinder.

In the preparation of this hasty communication only a few of the publications involved have been attainable, and many quotations at second-hand have been therefore necessary; yet I believe it will throw a truer light on the subject than did the letter which called it forth.

Very respectfully yours,

B. ALEX. RANDALL, M.D.

1835 CHESTNUT ST., January 31, 1882.

NEWS ITEMS.

CINCINNATI.

(*From our Special Correspondent.*)

FREE VACCINATION at the Health Office has been suspended by the health board. Gratuitous vaccination, it was at first supposed, would be accepted only by the very needy of the city. But it was soon discovered that among the hundreds who daily applied were very many who were well able to pay for their attendance, as well as others who came from neighboring villages. The work has now been transferred to the district physicians in the different wards of the city, they being less likely to be imposed upon by non-residents and those in good pecuniary circumstances.

SPRING SESSIONS will be held this year, as usual, by the three regular medical colleges. These will begin about the middle of March and continue two months. They are designed principally as post-graduate sessions, and consist mainly of clinical, laboratory, and operative courses. These are not recognized by the colleges as regular lecture courses, such as are demanded of the candidate for the degree.

Summer graduating terms are here looked upon with disfavor, and are considered mere catch-penny affairs, and none of our colleges hold such sessions.

PITTSBURG.

(*From our Special Correspondent.*)

ARRESTS FOR ADVERTISING NOSTRUMS.—Through the efforts of Drs. Jos. N. Dickson, Wm. R. Hamilton, and one or two other physicians in this city, there has been, within the last ten days, several arrests and convictions of irregular practitioners and one druggist for "advertising medicines, drugs, and nostrums for the cure of secret diseases, etc."[1]

There are suits pending against Dr. Hartman and others who have escaped from the city and State. Dr. C. R. Lightner (a graduate of Bellevue Hospital Medical College) was arrested and convicted for advertising (in common with his partner, Dr. Hartman,) Pe-Ru-Na, which, it is stated, among many other things, will "restore sexual debility to the energy, fire, and vigor of youth." After conviction, Lightner was let off upon payment of all the costs and attorneys' fees, and his voluntary publication of a card in the daily papers, promising "not to distribute pamphlets recommending nostrums, etc., for private diseases and female complaints."

Another man was convicted for advertising "Ricord's Specific Pills" for gonorrhœa, gleet, and similar diseases. He is a druggist here, and an ex-president of the College of Pharmacy. He took high ground when arrested, and asserted he was being prosecuted for purposes of blackmail, but changed his tune when he discovered it was impossible to make any settlement of the case that would at all benefit the prosecutors in any way. To mend his ways and sin against public decency no more was the only ground upon which he could be let off. He, likewise, made solemn promises, and published a card, stating that until recently he was ignorant of the law touching advertisements of certain patent medicines and nostrums, and that since he has been informed of the law on the subject, he has withdrawn his advertisements, and he declares his intention to comply with the law.

Dr. George was arrested for a like offence, and lodged in jail in default of bail. He plead guilty, paid his fine on two charges, and promised to do better in future.

[1] *Vide* Pamphlet Laws of Penna., 16th March, 1870, forbidding publication of nostrums for secret diseases, etc.

SCOTLAND.

(*From our Special Correspondent.*)

ABERDEEN UNIVERSITY.—Sir Erasmus Wilson has just added to his munificent benefactions to science the gift of £10,000 for the institution and endowment of a chair of pathology in the University of Aberdeen. The professional staff of this medical school has long felt the want of pathological teaching, although, with the exception of Edinburgh, no other university in Scotland is provided with a chair for this subject.

UNIVERSITY OF EDINBURGH.—At present the degrees of Bachelor of Medicine (M.B.) and Master of Surgery (C.M.) are granted jointly or separately, after precisely the same examinations. Nearly all medical graduates have been accustomed to take both degrees, as two separate qualifications, one in medicine, and the other in surgery, are requisite for entrance to the army and navy, and for other public situations, although in point of fact the taking of the one implied the possession of the knowledge requisite for the other, and, if the extra fee were paid, the actual possession of the other degree. By recent powers obtained from the Privy Council, the Senate of the University has resolved for the future to grant the degrees always jointly, so that it will be no longer possible for any student to obtain the one degree without the other.

SMALL-POX.—The mortality returns for the week ending January 28, give the following number of deaths from small-pox. New York, 11; Philadelphia, 18; Boston, 6; Erie, Pa., 1; Richmond, Va., 21; Wilmington, Del., 1; Gould, Kan., 6.

The returns to the National Board of Health during the same period show 6 new cases at Dayton; 3 at Indianapolis; 2 at Winchester, Va.; 3 at Louisville; 16 at Gould, Kan. At Cincinnati 22 new cases were reported on the 28th, and 26 on the 30th. At Pittsburg 18, and at Allegheny 6 new cases were reported on January 31. During the month of January the mortality in Philadelphia, as compared with the same month of 1881, had diminished 60 per cent.

SMALL-POX IN MOUNT CARMEL, ILL.—Mount Carmel, Ill., has recently passed through an epidemic of small-pox which is interesting from the accuracy with which the starting-point of the epidemic was traced, and the marked character of the disease in the early cases. After exposure to the contagion of small-pox in St. Louis, where he roomed with a man who subsequently died in the pest-house of variola, a man aged

forty-eight years died suddenly in the cars while in the company of his daughter and some friends, and his death was not suspected until it was time to change cars. No eruption was found on his body with the exception of a discoloration said to resemble purpura, which existed on his body and thighs. No one was apparently aware of the fact that he had been exposed to small-pox. The funeral was largely attended. Fourteen persons were exposed to the disease in handling his body, of whom twelve had been vaccinated and two had not. Both these last died of small-pox. Of the former only one suffered, and he in a very light form, and recovered. Three others, unvaccinated and exposed in attending the first two, died of small-pox. Four others also had varioloid or small-pox and recovered. Three of them had been vaccinated; the fourth, who had not been, was an exceptionally strong and hearty man, to which, doubtless, he owes his escape. We are indebted to Dr. J. Schneck, Chairman of the Mt. Carmel Board of Health, for an admirable report of these cases, of which six died and five recovered. All of the ten cases could be traced to contact with the body in preparing it for burial, while ignorant of the cause of death.

SMALL-POX AT GRATZ, PA.—From a press dispatch of January 30, we learn that considerable excitement prevails at Gratz, a small town a few miles from Harrisburg, over the small-pox. Last week a prominent citizen died of small-pox, but the nature of the disease not being announced by the physician, there was an old-fashioned country funeral, at which hundreds of people were present. The sickness of three children followed, and of those at the funeral seventeen are now down with the disease.

HEALTH IN MICHIGAN.—For the week ending January 21, 1882, the reports indicate that tonsilitis, intermittent fever, membranous croup, and rheumatism have considerably increased, and scarlet fever, erysipelas, inflammation of the bowels, and cerebro-spinal meningitis have considerably decreased in area of prevalence.

Cases of small-pox were reported as follows: Twelve, at Leesburg, in Prairie Ronde Township, Kalamazoo Co.; six, at Geneva, Van Buren Co., (believed to have been brought from Chicago); seven (convalescent), at Bay City; two (new), at Grand Rapids; two, at Detroit; one (a tramp from Grand Rapids), at Marshall; one (new), at Monroe; one also in Menominee Co., and one at Escanabo, Delta Co.

NEW YORK STATE MEDICAL SOCIETY will hold its annual meeting at Albany, February 7, 8, and 9, under the Presidency of Dr. Abram Jacobi. Interesting papers have been promised by Drs. E. C. Seguin, E. R. Squibb, M. J. Roberts, W. C. Jarvis, Geo. H. Fox, D. B. St. John Roosa, E. Vanderpoel, L. Elsberg, D. Webster, L. D. Bulkley, T. G. Thomas, A. Flint, V. P. Gibney, S. Sexton, E. H. M. Sell, D. Lewis, of New York, W. W. Potter, of Buffalo, and Hailes, of Albany.

UNIVERSITY OF PENNSYLVANIA.—The ordinance conveying to the University a lot of ground in West Philadelphia was passed unanimously by Councils and approved by the Mayor on January 24. A preliminary injunction restraining the Mayor from signing the deed of transfer, was obtained by a local newspaper publisher, but on January 31, after a full argument, was dissolved by the Court. It is probable that the transfer will now be consummated, and that the University will enter into possession of a valuable addition to its landed property.

THE INTERNATIONAL MEDICAL CONGRESS OF 1884.—Acting under the powers delegated to them at the final meeting of the Congress, the Executive Committee of the late Congress addressed an invitation to Professors Hanover and Panum, Vice-presidents of the Congress, to arrange for holding the next International Congress, in 1884, in Copenhagen. This invitation has been promptly and cordially accepted, and the next International Congress will accordingly be held, in the year 1884, in Copenhagen.

MEDICAL SOCIETY OF THE COUNTY OF KINGS, N. Y.—At the annual meeting of this Society, held January 17, Dr. C. Jewett was elected President, Dr. Hopkins Vice-President, and Dr. Wyckoff Secretary.

QUARANTINE AGAINST PITTSBURG.—The State Board of Health of West Virginia has given notice of its establishment of quarantine against the city of Pittsburg, on account of the prevalence there of small-pox, and it has directed inspection to be made by its agents of all passengers, baggage, and freights coming into the State from that city.

A NEW PROFESSORSHIP IN THE PARIS FACULTY.—By a decree published on January 2, 1882, on the report of the Minister of Public Instruction, a Chair of Clinical Professor of Diseases of the Nervous System has been created in the Faculty of Medicine of Paris. By another decree of the same date, M. Charcot, Professor of Pathological Anatomy in the Faculty of Medicine of Paris has been transferred at his own request to this new Chair.

HARVARD UNIVERSITY.—A person desiring to give a fund for the medical education of women in the Harvard University, asked the President and Fellows whether such a fund would be accepted and used as designed. Majority and minority reports were submitted by the committee of the Board of Overseers in charge, and after a long discussion it was voted, eleven to six, to adopt the minority recommendation, which is to accept a fund, the income of which shall ultimately be used for the medical education of women.

MEDICAL PRACTITIONERS IN WEST VIRGINIA.—The State Board of Health has licensed eight hundred and forty-three practitioners in medicine and surgery in this State. Three licenses were issued during the past year to itinerant practitioners. It is stated that under the influence of the registration law quite a number of former practitioners are at present attending medical lectures to meet its requirements.

Among the diplomas offered for verification, were discovered a few of spurious character, which had either been directly bought, or obtained upon a nominal examination. These, of course, the Board rejected.

ANTISEPTIC METHODS.—In its review of the *Annus Medicus* the *Lancet* thus speaks of carbolic acid. Indeed, we may say that the day of carbolic acid is over, not so much because of its danger, as because we have found a substitute or substitutes for it as reliable but not so poisonous. Incalculable good, however, has been achieved by means of carbolic acid; it has been thoroughly efficient, as a rule harmless, easy of manipulation, cheap, and has rendered antiseptic surgery possible years before it otherwise would have been. Carbolic acid has not failed, but something better has been found. These substitutes are eucalyptol, iodoform, terebene, and resorcin. Mr. Lister uses eucalyptol gauze, and finds it quite reliable; iodoform has been used by him, but it is chiefly famous for the results obtained with it by Esmarch and his assistant Tilmanns. At present resorcin has not been much used in this country, but it promises well. Connected with this change is

the substitution of a dry-cotton dressing for the gauze used by Mr. Lister; Esmarch employs cotton impregnated with iodoform, and Gamgee has introduced pads of absorbent cotton rendered antiseptic by carbolic and salicylic acids. Both of these dressings appear to be fast gaining in popularity, and certainly possess some advantages over the gauze. The "spray" has been abandoned by many surgeons, and even Mr. Lister has spoken in qualified terms of its necessity; and had we to prophesy, instead of to record accomplished facts, we might venture to predict an early abandonment of this cumbrous addition to a surgeon's armamentarium. Catgut prepared with chromic acid and kangaroo tendons have been introduced as new forms of animal ligature. They both appear to be trustworthy; the chromic catgut is a great improvement upon the old catgut, and is, indeed, one of the most important improvements of Mr. Lister's treatment introduced in recent years.

COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO.—We have received a preliminary announcement of this institution, which proposes to commence its first regular session about the 1st of October, 1882. It is stated that a pupilage of at least four years, including a graded course of instruction, covering at least three full winter sessions will be compulsory. Examinations for the degree of Doctor of Medicine will be conducted by a committee of examiners who have no other connection with the College.

The Faculty is not yet announced. Dr. A. Reeves Jackson is President, and D. A. K. Steele, M.D., Secretary of the Board of Directors.

HYGIENE IN SPAIN.—Spain is becoming more and more active in its participation in hygienic questions. A Hygienic Society has recently been formed, and approved by the King, of which the controlling section is located in Madrid with branches in all the capitals of the provinces and principal towns in the kingdom. Each section is composed of active and corresponding members, while the central society has the right of nominating honorary and foreign corresponding members. All who take an interest in hygienic science are eligible for membership. Each section is subdivided into sub-sections on general hygiene, epidemiology, climatology and medical topography, hygienic and medical statistics, and sanitary police.—*Gaz. Méd. de Paris*, Dec. 24, 1881.

MASSACHUSETTS GENERAL HOSPITAL.—The will of Mary Pratt, of Watertown, Massachusetts, recently deceased, gives $20,000 to this medical charity.

DR. BILLING'S ADDRESS ON MEDICIAL LITERATURE, read at the International Medical Congress, has been translated into French, and is being published in *L'Union Médicale* for January.

DIED.—At Edinburgh, on January 27, SIR ROBERT CHRISTISON, Bart., M.D., F.R.S. Sir Robert Christison was born on July 18, 1797, and was educated at the University of Edinburgh, where he received the degree of M.D., in 1819, and afterwards studied toxicology under Orfila in Paris. Soon after his return from the Continent, in 1822, he was appointed Professor of Medical Jurisprudence in the University of Edinburgh, and ten years later was promoted to the Chair of Materia Medica. In 1866 he received the degree of D.C.L. from Oxford, and LL.D. from his own University in 1872; he was created a Baronet in 1871. He twice held the position of President of the Royal College of Physicians, Edinburgh, and at the time of his death was Physician in Ordinary to the Queen for Scotland. His *Treatise on Poisons* is recognized as the standard work on the subject.

— At the end of December, at the age of eighty-four, M. BRIERRE DE BOISMONT, the well-known alienist. Born in Paris on the 18th of October, 1797, M. Brierre de Boismont received the degree of Doctor of Medicine in 1825. In the same year he published his *Elements of Botany*, and a treatise on *Pellagrous Insanity in Italy*. Among his other publications may be mentioned his work on *Suicidal Mania* and on *Hallucinations*.

NOTES AND QUERIES.

CONGENITAL BRONCHOCELE—VICARIOUS MENSTRUATION.

To the Editor of the MEDICAL NEWS:

SIR: In your issue of January 21, under the head of "Notes and Queries," I see a communication from Dr. M. R. Morden, Adrian, Michigan, asking if there had ever been any record of congenital bronchocele? I attended a lady on the 20th of this month, who gave birth to a male child apparently healthy, but I have since been called to see it on account of the anxiety of the parents about an enlargement of the neck, which I failed to notice (in my hurry) on the day of her confinement, and cannot, of course, be positive that it was present then; but it is certainly a veritable bronchocele. Will probably let you hear more of it as it progresses.

I would like now to ask if you or any correspondent can refer me to the record of any cases of vicarious menstruation?

Yours truly,

J. T. GORDON.

CARLYLE, ILL., January 25, 1882.

[Cases of vicarious menstruation are every now and then recorded in the journals. Our correspondent will find references to a number of examples in Churchill on the *Diseases of Women*. The latest recorded cases that we recall are one in the *New York Medical Journal* for August, 1881, p. 180, in which the patient vomited a considerable quantity of blood every month, and two in the *American Journal of Otology*, for April, 1881, p. 133, in which the hæmorrhage was from the ear.—ED.]

NATIONAL MEDICAL MUSEUM AND LIBRARY BUILDING.

THE plans and estimates for a National Medical Museum and Library Building, at Washington, have been referred by Congress to the Joint Committee on Public Buildings and Grounds, consisting of Senators Edward H. Rollins, New Hampshire; Justin S. Morrill, Vermont; Angus Cameron, Wisconsin; Charles W. Jones, Florida; George G. Vest, Missouri; and Representatives William S. Shallenberger, Pennsylvania; J. H. Lewis, Illinois; M. E. Cults, Iowa; M. L. De Mothe, Indiana; J. A. Scranton, Pennsylvania; Nicholas Ford, Missouri; J. Hyatt Smith, New York; Philip Cook, Georgia; A. S. Hewitt, New York; J. W. Singleton, Illinois; H. A. Herbert, Alabama.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 24, TO JANUARY 30, 1882.

STERNBERG, GEO. M., *Major and Surgeon*.—Granted leave of absence for one month, and during his absence Surgeon J. C. Bailey to attend the sick at Point San Jose, Cal.—*S. O. 9, Military Division of the Pacific and Department of California, January 16, 1882.*

COMEGYS, E. T., *Captain and Assistant Surgeon*.—Now stationed at Columbus Barracks, Ohio, to report in person to the President of the Medical Examining Board, in session in New York City, for examination for promotion, and, upon completion of examination, to return to proper station.—*S. O. 19, A. G. O., January 25, 1882.*

BANISTER, J. M., *First Lieutenant and Assistant Surgeon*.—Fort Reno, Indian Territory. Granted leave of absence for one month.—*S. O. 18, Department of the Missouri, January 24, 1882.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XL. SATURDAY, FEBRUARY 11, 1882. No. 6.

ORIGINAL LECTURES.

CARTWRIGHT LECTURES.

ON THE EXPERIMENTAL METHOD IN MEDICAL SCIENCE.

Delivered before the Association of the Alumni of the College of Physicians and Surgeons, New York, February 7, 1882.

BY JOHN C. DALTON, M.D.,

PROFESSOR OF PHYSIOLOGY IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

LECTURE III.

NERVOUS DEGENERATIONS, AND THE THEORY OF SIR CHARLES BELL.

MR. PRESIDENT AND GENTLEMEN: It is now a little over forty years since the beginning of an investigation which has produced most important changes in the study of the nervous system. It relates to the alteration of structure taking place in nerves after they have been divided by a transverse section.

The manner in which attention was first directed to this point is as follows. It had long been known that when a nerve was cut at any point, the immediate effect was a suspension of its functional activity. If it were a motor nerve which had been divided, voluntary motion was abolished in the parts below; and if a sensitive nerve, there was loss of sensibility in the skin where it was distributed. But this interruption of the nervous activity was not always permanent. In some cases the power of motion or sensation would return in the affected parts; and the ends of the nerve were then found to be reunited by a cicatricial tissue, in which there were connecting nerve-fibres of new formation. This reunion of a divided nerve, and the mode in which its structure and functions were re-established, formed the subject of many laborious investigations.

The observations in question were mainly directed to the cicatrix between the ends of the divided nerve. This was naturally supposed to contain the key of the whole secret, and consequently received most of the attention given to the subject. But in 1839 Nasse[1] extended his examinations to the nerve-fibres at a lower level. He divided the sciatic nerve in frogs and rabbits; and, after waiting from two to five months, found that the fibres in the separated portion of the nerve had become altered in structure. They were of irregular form, granular, and semi-opaque. They often contained what seemed to be minute fat-globules from the degeneration of their myeline, and they appeared to undergo in this way a gradual atrophy. Nasse's observations were almost immediately followed by those of Gunther and Schön,[2] which were to the same effect. They were made on the divided sciatic nerve in rabbits from twelve hours to one year after the operation; they showed that a nerve, after a few days' separation from its nervous centre, loses its irritability, so that its galvanization will no longer produce contraction in the muscles below; and that this loss of irritability coincides in time with the granular degeneration of its fibres.

All these researches were connected with the question of the re-establishment or regeneration of the nervous continuity; and they did not extend for any great distance below the point of section. Thus far, whenever observers use the term "regeneration," as applied to divided nerves or nerve-fibres, they mean the formation of new connecting fibres in the cicatricial tissue. It was supposed that when this reunion took place, the altered fibres below were restored to their normal condition, and the nerve in this way enabled to resume its functions. The fact of degeneration was considered as of secondary consequence, as limited in extent, and often of temporary duration.

But ten years later the subject was taken up afresh by Augustus Waller, and was treated by him in a manner so original and so thorough that it at once assumed a character of the first importance. Waller began his professional life in England as a practitioner of medicine, but he had a strong taste for independent research, and, after being for a time Professor of Physiology in the medical school at Birmingham, he transferred his residence to the continent, where he remained for most of his subsequent life and where the greater part of his scientific work was accomplished. For the anatomical study of muscular and nervous fibres he employed the tongue of the living frog. This gave him a great advantage, since the extensibility and transparency of the organ enabled him to examine its internal parts in their normal place and condition, undisturbed by the contact of artificial reagents. He applied this method to the observation of nerve-fibres, and the change which they undergo after division; and thus followed their gradual degeneration, from day to day, under the microscope.

One of his first and most important results was that the degeneration in the fibres of a divided nerve, below the point of section, extends through their whole length, reaching to its ultimate ramifications. After division of the glosso-pharyngeal nerve in the neck, he saw its degenerated fibres in the tongue, and even in the papillæ of the mucous membrane. He also established the fact that in a nerve once divided, the degeneration of the affected nerve-fibres is final; and that when the nervous functions are restored, it is by a true process of regeneration, that is, the growth of new fibres throughout the separated portion of the nerve.

But the principal merit in Waller's discovery was something additional. He did not rest content with its value as an acquisition, he made it serve as an instrument. He saw in the degeneration of divided nerve-fibres a means of investigation, which he at once put to further use. A nerve is often made up from fibres of different sources. It receives branches of communication from other nerves, and in the inosculating filaments between two different trunks, there may be fibres going or coming in either direction. In the nervous trunks and branches, these fibres are for the most part hopelessly intermingled, and it is impossible to follow them for any distance by ordinary dissection. But by dividing, in the living animal, a nervous trunk or branch near its source, Waller could afterwards trace its degenerated fibres, however erratic their course, or whatever their distribution. He communicated his results to the French Academy of Sciences,[1] under the title: *A New Method for the Study of the Nervous System; adapted for Investigating the Anatomical Distribution of the Nerves.*

The first application of the new method was in the frog's tongue. This organ is supplied by two nerves,

[1] Archiv für Anatomie, Physiologie, und Wissenschaftliche Medicin. Berlin, 1839, p. 405.

[2] Ibid., 1840, p. 270.

[1] Comptes Rendus de l'Académie des Sciences. Paris, 1851. Tome xxxiii., p. 606.

corresponding respectively to the glosso-pharyngeal and the hypoglossal. After dividing one of these nerves in the neck, and allowing time for its subsequent degeneration, Waller could determine the course and destination of all its fibres. He followed them throughout the frequent anastomoses of the two nerves, when the altered fibres could always be distinguished from the normal ones around them, and the two kinds were so different in appearance, that, as he expressed it, "there could be no doubt whatever as to the origin of either."

These results were obtained by repeated and accurate experimental investigation, and they have been fully corroborated by subsequent observers down to Vulpian,[1] in 1866, and Ranvier,[2] in 1878. According to Vulpian, six weeks after the division of the sciatic nerve, in a dog, no unaltered nerve-fibres could be found in the muscles of the corresponding foot; and in similar experiments by Ranvier on the rabbit, the terminal ramifications of the nerve in the muscles of the leg contained only nerve-fibres with disorganized and granular myeline.

The advantages in Waller's mode of procedure were so obvious and so readily verified, that it was soon generally adopted, and received the name of the "Wallerian method." It at once yielded, in the hands of its author, much interesting information. After division of the pneumogastric nerve on one side, in cats, at the level of the larynx, granular degeneration was found throughout its peripheral fibres, except in those joining it below, from the inferior cervical ganglion; all of which remained normal. Above this junction the nerve was wholly disorganized; below, it contained a mixture of fibres, normal and degenerated. It was thus made evident that the inosculating branches between the two nerves are given by the sympathetic to the pneumogastric, and not from the pneumogastric to the sympathetic.

Physiologists had often been at variance as to the origin and character of the *chorda tympani;* that remarkable filament of communication between the facial and lingual nerves. Was it a branch of the facial nerve, going to the lingual? Or was it an offshoot from the lingual, returning to join the facial? This point was determined by the method of section. Waller introduced his stylet into the middle ear, and divided the filament where it crosses the membrana tympani. Fifteen or twenty days afterwards, nearly all its fibres were degenerated between the point of section and the lingual nerve; that is, in the direction of their peripheral distribution. The chorda tympani was consequently shown to be a branch of communication *from* the facial nerve *to* the lingual.

In this way, many doubtful questions of nervous distribution received their solution. The granular degeneration of the divided nerve-fibres became an artificial aid to the anatomist, of the same value as the injection of minute bloodvessels with an opaque pigment. Even a single disorganized fibre could be distinguished among a crowd of normal ones; and in a mixture of the two, the numerical proportion of each could be fairly determined.

But Waller did not remain satisfied with this success. He determined to apply the same method which he had used for the nervous trunks and branches to the study of the nerve roots;[3] and in doing so, he opened a new chapter of nervous physiology, and greatly enlarged the field of his operations.

The history of these experiments is so well known that they only need to be stated in a few words. Waller had already shown that if a spinal nerve were divided at its exit from the vertebral canal, all its peripheral parts suffer degeneration. Motor and sensitive fibres are alike involved, and can be traced, in their disorganized condition, to their ultimate termination in both the muscles and the integument. On continuing the same mode of investigation within the vertebral canal, if the anterior root only were divided, the motor fibres alone degenerated in the trunk and branches of the nerve, while its sensitive fibres remained normal; if the posterior root were divided outside its ganglion, the sensitive fibres of the nerve degenerated, and the motor fibres were unaffected; and in both cases the portion of the nerve root still connected with the spinal cord preserved its normal structure. But if the posterior root were divided above the situation of its ganglion, two remarkable consequences followed. First, there was no degeneration of the nerve whatever outside the ganglion; and, secondly, that portion of the nerve root separated from the ganglion, but still united with the spinal cord, suffered complete degeneration.

These effects were repeatedly observed, under varied conditions, until there was no doubt in regard to them. In the frog, when both roots of a sciatic nerve were divided above the level of the ganglion, there was, of course, equal loss of motion and of sensibility in the paralyzed limb; but while all its muscular nerve-fibres degenerated, its sensitive fibres, distributed to the skin, exhibited no alteration whatever, even at the end of two months. Similar experiments on warm-blooded animals turned out in the same way. In dogs and cats, Waller utilized for this purpose the exceptional position of the second cervical nerve, the two roots of which remain distinct in these animals, until after emerging from the intervertebral foramina. He could thus operate on the nerve roots without opening the vertebral canal, and by this means he verified Magendie's discovery, that section of the anterior root destroys the power of motion; and that of the posterior root, the power of sensibility. But he demonstrated furthermore, that when both roots are severed above the level of the ganglion, all the motor fibres of the nerve degenerate, and all its sensitive fibres remain sound.

It is, therefore, evident that the immediate loss of action in a divided nerve, and its structural degeneration, are two independent phenomena, having nothing to do with each other. A motor nerve, when cut, ceases to excite voluntary motion, not because its fibres are incapacitated by degeneration, but because their physical continuity is broken at one point; and a sensitive nerve, under like conditions, can no longer communicate with the sensorium for the same reason. The proof of this is that, if we galvanize the motor nerve below the point of section, it at once calls out the action of its muscles; and a similar stimulus, applied to the sensitive nerve above its point of section, will be transmitted to the brain and produce the effect of a sensation.

But after some days a different condition shows itself in the peripheral part of the divided nerve. Its fibres are then unable to react under artificial stimulus, and their galvanization no longer produces muscular contraction. This is owing to their progressive degeneration, which requires time for its development, but which at a certain stage destroys the functional activity of the nerve-fibres. Simple paralysis of motion and sensation is consequently the *immediate* result of division of a spinal nerve. Its degeneration, with loss of irritability, is a subsequent and *secondary* result. The independence of the two is especially manifest in Waller's ex-

[1] Leçons sur la Physiologie du Système Nerveux. Paris, 1866, p. 243.

[2] Leçons sur l' Histologie du Système Nerveux. Paris, 1878. Tome ii., p. 349.

[3] His second communication to the French Academy, in 1852, was entitled "Experimental Researches on the Structure and Functions of the Ganglia." Comptes Rendus de l'Académie des Sciences. Paris, 1852. Tome xxxiv., p. 524.

periments on the spinal nerve roots; for, when both are divided above the level of the ganglion, the motor fibres of the anterior root become degenerated throughout their distribution in the paralyzed parts; but the sensitive fibres, from the posterior roots, remain everywhere sound in the integument of the same region.

From these facts Waller concluded that the two sets of nerve-fibres had different centres of nutrition; that the motor fibres of the anterior root were dependent for their structural integrity on connection with the spinal cord; while the sensitive fibres of the posterior root depended on their connection with the spinal ganglia. He was fully justified in claiming that his results were unequivocal, and "calculated to throw a new light on the relations of the nervous system."

For Waller's communications on this subject to the French Academy, he was awarded in 1856 the Montyon Prize of Experimental Physiology, by a committee consisting of Flourens, Rayer, Serres, Milne-Edwards, and Bernard. In reporting the decision of the committee, the Chairman, Bernard, begins with the following words: "The discoveries usually presented to us are of two different kinds. In some the facts have been already to a certain extent anticipated, and are mainly serviceable in their new form by increasing the precision of our knowledge, and by elucidating subjects previously obscure. The others, on the contrary, are unexpected. The principal feature in them is their novelty; and they enlarge the boundaries of science, not merely by the solution of particular questions, but still more by the new ideas and suggestions which they originate. It is to the last of these two categories that the present essay belongs."

It soon appeared that the committee were not mistaken in their estimate. The immediate result of Waller's researches was the discovery of the so-called "centres of nutrition" for nerve-fibres of different kinds. The existence of these centres of nutrition was fully demonstrated; although it was not quite plain, and has not even yet become so, in what way their influence is exerted. But there was also the additional discovery that the degeneration of divided nerve-fibres may take place in two opposite directions. It may be *centrifugal*, that is, from the point of section to the periphery; or, it may be *centripetal*, that is, from the point of section towards the spinal cord and brain. This fact afterwards became the most prolific source of further investigation.

Up to this point, Waller's experiments had been confined to the spinal nerves and nerve roots. In his last communication to the French Academy,[1] he goes a step further and traces the course of similar degenerations in the cord itself. He divided the spinal cord, in a dog, between the third and fourth lumbar vertebræ. After twenty days the cord was found to be reunited at the line of section. But above the section the posterior columns were disorganized for the space of about two vertebræ; while in the inferior segment the same columns, as well as the posterior nerve roots, were normal throughout. The anterior nerve roots, on the contrary, were completely degenerated for the first three pairs below the section; the alteration diminishing gradually in amount for the fourth, fifth, and sixth pairs. Thus, there may be, within the columns of the cord, as well as in its nerve roots, centripetal or centrifugal degenerations affecting exclusively particular nervous tracts.

This discovery corresponded with certain pathological observations in man made about the same time by Türck, and communicated by him to the Academy of Sciences at Vienna.[2] They were cases in which post-mortem examination revealed an old, morbid deposit in the brain, together with a structural alteration of the spinal cord on the opposite side. This alteration consisted mainly in an abundance of abnormal, granular cells, occupying the tissues of the cord and resembling those met with about the morbid deposit in the brain. The principal feature of the alterations in question was that they occupied definite longitudinal tracts, the rest of the cord being normal. By examining successive sections, at different levels, it became evident that from the lesion in the brain to the lower end of the spinal cord only certain bundles corresponded in situation with those which could be demonstrated by dissection in normal specimens of the cord, after hardening in alcohol.

Observing this correspondence, in certain cases, between the degenerated tracts and parts already known, the author was led to apply the same means of observation to the study of anatomical relations not so well understood. The attempt proved successful. The first fact which it brought out, was a distinction between the anterior and posterior segments of the lateral column. No such distinction can be shown by ordinary dissection, most of the nerve-fibres in both segments running in a direction parallel with each other, and between origins and terminations too distant to be traced. But in some of the cases mentioned, the morbid alteration of the lateral column was found only in its posterior part, the anterior part remaining sound; and this difference was so constant, in sections made at various levels, as to leave no doubt that there must be some anatomical distinction between the two segments of the column, extending through the greater part of its length.

It was also seen, in these cases, that, on approaching the upper end of the cord, the degenerated tract shifted its position forward and inward, and, at the medulla oblongata, crossed into the anterior pyramid of the opposite side. Thence it extended upward through the pons varolii, where the distinction was extremely evident, the transverse bundles of the pons being free from alteration, while its longitudinal bundles were deeply affected. It appeared, therefore, that the degenerated tracts had been invaded by a special alteration, confined to their own limits, and extending continuously, from the seat of the brain lesion, through the crus cerebri, the pons, and the anterior pyramid of the same side, and thence through the posterior part of the lateral column on the opposite side, quite to the lower end of the spinal cord.

This showed that there was a longitudinal tract of nerve-fibres, reaching for long distances in the cerebro-spinal axis, and having, so to speak, its own special centre of nutrition; and that when this centre of nutrition was disturbed or disorganized by local lesion, the subsequent degeneration might extend throughout the tract in question, while others in its immediate contiguity remained sound. The cases observed by Türck were accompanied by more or less hemiplegia; and while the brain lesion, as well as the degeneration of the pons and anterior pyramid, were, as usual, on the opposite side, that in the spinal cord was on the same side with the paralysis. Everything showed the degenerated portions in the spinal cord to be continuous with the opposite anterior pyramids and their extension in the crura cerebri, and consequently to represent the motor tracts of the cerebro-spinal axis. But while Türck followed the crossing of these tracts at the decussation of the pyramids, he also showed that in certain cases their crossing was incomplete; that is, although the bulk of a degenerated anterior pyramid crosses at the level of the decussation, and reappears below in the lateral column of the opposite side, a remnant of its fibres continue their downward course for some distance, on the same side. These direct col-

[1] Comptes Rendus de l' Académie des Sciences. Paris, 1852. Tome xxxv., p. 301.

[2] Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften. Wien, 1851, p. 288.

umns, visible more or less constantly in the cervical portion of the cord, are still known by the name of the "Columns of Türck."

But his most important results were those indicating the difference, in anatomical connection, between the anterior and the posterior parts of the lateral column. These two parts were distinguishable from each other by the granular deposit with which one was infiltrated while the other remained normal; and the deposit reappeared with such constancy at the same spot in successive sections, and crossed so distinctly at the decussation of the pyramids, as to show that it followed the course of an associated bundle of nerve-fibres. As this bundle represented, in the cord, the continuation of the crus cerebri and anterior pyramid above, the whole tract, from end to end, afterwards received the name of the "pyramidal tract." The first indication of the exact locality of this tract, in the lateral columns, was derived from the sections of Türck.

The same author made an incidental observation, afterwards seen to be very important, in regard to degenerations from local lesion of the cord itself. They were instances of paraplegia from compression or disorganization of the spinal cord at one point. In these cases the portion of the cord above the lesion, while nearly free from granular degeneration, nevertheless contained single degenerated tracts, always identical in situation, extending upward to the medulla and pons. But these tracts were not those found degenerated after a brain lesion, and the latter were entirely sound in the above-mentioned cases of injury to the cord. If one portion of the spinal cord, therefore, can degenerate in consequence of a lesion situated above it, another and an entirely different portion may be affected by degenerations coming from below.

So far, the knowledge of degeneration within the spinal cord had been mainly acquired from pathological observations in man. But about ten years ago Goltz, in Strasburg, undertook a series of investigations on the functions of the lumbar portion of the spinal cord, especially with regard to its influence on the sexual and urinary organs. His experiments were performed on young dogs by dividing the cord transversely at the lower end of the dorsal region, and then preserving the animals long enough to study the permanent effects of the operation. By adopting various improvements in the selection of animals, the operative procedure, and the subsequent treatment, he became very successful. The cord was divided without serious injury to the vertebral column or the external parts. Dogs of the proper age and organization were not dangerously affected by the operation, sometimes taking food within the first twenty-four hours, and generally regaining their natural appetite in a few days. The wounds healed in two or three weeks, and some of the animals were preserved several months, remaining paraplegic, but otherwise in good condition.

This was a valuable material for the study of degenerations in the spinal cord; and it was utilized for that purpose by Schieferdecker,[1] the assistant of Goltz, who was already familiar with the history and condition of the animals employed.

On examining microscopic sections of the cord in these cases, the granular degeneration of the pyramidal tracts was recognized. It was present in every instance, and had invariably taken a descending course, from the point of section to the lower extremity of the cord. This portion of the spinal cord, therefore, became altered after section, in the same way as a divided spinal nerve, that is, from the centre towards the periphery; and the degeneration of the pyramidal tract, whether it be due to a cerebral lesion, or to compression or transverse section of the cord itself, follows the same direction.

On the other hand, when a similar degeneration is met with in the posterior columns of the cord, it is always ascending. We have now the experience of Charcot,[1] to corroborate the earlier assertion of Türck, that such posterior degenerations invariably extend from the point of injury or disease upward towards the brain, and never in a downward direction. By this means the ascending and descending degenerations of the spinal cord were established with the same certainty as the centripetal and centrifugal degenerations of the nerve roots; and like them, were shown to occupy separate tracts, easily distinguishable from each other.

These facts greatly increased the confidence of physiologists in the value of degenerations as indicating the continuity and destination of nerve-fibres. It was evident from the first that a divided nerve-fibre degenerates because of its severance from some special nerve centre; and, once cut off from this centre, it becomes affected throughout its remaining length. When we see, in the spinal nerves, complete degenerations strictly limited to the ramifications of a single trunk, and similar alterations in the spinal cord equally confined to particular tracts, we can hardly refuse the conviction that these tracts also consist of continuous nerve-fibres following a common direction. Waller's experiments on the nerve roots show that when such a group of fibres meets a ganglion or centre of gray substance interposed in their course, then degeneration does not pass this point. Either the injured fibres receive a further accession of nutritive energy from the ganglion, or else they terminate in it ssubstance, and are then replaced by new fibres originating from its gray matter. This gives a special significance to the fact observed by Charcot[2] in regard to disease of the pyramidal tracts. These facts are manifestly the channels for voluntary motion in the spinal cord. The paralysis caused by either their morbid alteration or their experimental division shows that they are really the paths followed by voluntary motor impulses from the brain to the anterior nerve roots. But descending degenerations of the pyramidal tract, however complete in the spinal cord, do not usually extend to the motor nerves or nerve roots. This is easily explained on the assumption that the fibres of the pyramidal tract terminate in the gray substance of the anterior horn, while those of the anterior root have an origin of their own at the sam point. The nerve root, therefore, degenerates only when divided beyond its emergence from the anterior horn.

A further study of the posterior columns led to the additional discovery of two different kinds of degeneration, as well as to a distinction between different parts of these columns. Hitherto, the morbid alteration of nervous tracts had appeared only as e consequence of a local lesion, in either the ne es, spinal cord, or brain, extending upward or dowr ard from its origin, as if propagated in certain directi ns along the natural route of the nerve-fibres. These alterations of structure were, therefore, known as "secondary degenerations," because resulting from some primary affection in a different locality. But it appeared that certain tracts in the spinal cord might also be the seat of primary degenerations, originating within their own substance independently of lesions elsewhere. As these alterations often followed a similar course to those of secondary origin, occupying only their own tracts or system of fibres, they received the name of "systematic degenerations."

[1] Archiv für Pathologische Anatomie und Physiologie. Berlin, 1876, Band lxvii., p. 542.

[1] Leçons sur les Localisations dans les Maladies du Cerveau et de la Moelle épiniere. Paris, 1880, p. 247.

[2] Leçons sur les Maladies du Système Nerveux. Paris, 1877. Tome ii., p. 219.

The posterior columns of the cord were liable to both secondary and systematic degenerations. But these two affections occupied different regions, thus showing an anatomical distinction in the posterior column, like that already established between the front and back parts of the anterior column.

In the posterior column of the cord the inner part, next the median line, is a narrow band, visibly marked off from the remainder, in the cervical region, by a slight furrow on the surface. This is the *funiculus gracilis*, or the "column of Goll." At the medulla oblongata it diverges from the median line in an oblique upward direction, forming on the inner border of the restiform bodies the so-called "posterior pyramids." The columns of Goll are the seat of the ascending degenerations noticed by Türck. When they are affected in this way, their alteration extends unbroken from its starting-point, often quite to the level of the medulla oblongata; whence it is inferred that they are composed throughout of continuous fibres.

But the remainder of the posterior column is affected by degenerations which have a different form and different results. This portion is included between the column of Goll and the posterior nerve roots, and forms the outer part of the posterior column. It has not received a distinct name, but is important, owing to its connection with locomotor ataxia. It is regarded as made up of comparatively short fibres, originating and terminating in succession along the cord; for the reason that its secondary degenerations are never propagated to any considerable distance,[1] extending at most only two or three centimetres above their origin. But it is liable to systematic alterations of structure, mainly sclerosis, invading a large portion of its extent; and when such alterations occur, they are accompanied by symptoms of locomotor ataxia, never produced by structural disease in other parts. According to the observations of Charcot,[2] the columns of Goll may be completely degenerated without causing any signs of ataxia, while sclerosis of the outer part of the posterior columns is always accompanied by ataxic symptoms; and these symptoms are in proportion to the extent of the degeneration.

Lastly, the anatomical study of nervous tracts by the aid of secondary degenerations, has been carried into the brain itself. There is already a reasonable certainty of the extension of the pyramidal tracts through the anterior pyramids, the pons varolii, and the crura cerebri; and the fibres of the crus cerebri are manifestly succeeded by the diverging expansion of the internal capsule and the corona radiata. These expansions are, beyond question, for the most part, means of communication between the cerebral convolutions and the ganglia at the base of the brain; while the fibres of the crus cerebri connect the ganglia with the spinal cord below. But besides these interrupted communications, are there also direct fibres, running continuously from the motor centres in the cerebral cortex, through the corona radiata and internal capsule, into the pyramidal tract? The centres of motion about the fissure of Rolando might produce their effect when galvanized, either through the intervention of the cerebral ganglia, or more directly by means of continuous fibres. Such tracts of direct fibres have been sometimes imperfectly recognized in the examination of hardened specimens; but they have never been clearly demonstrated by this method, owing to the complicated interlacement of fibres in the upper part of the internal capsule. Their existence is mainly inferred from the course of descending degenerations in this region. According to Charcot,[1] destructive lesions of the cortex, in the anterior and posterior central convolutions, give rise to degenerations in the white substance which pass downwards through the internal capsule, crura cerebri, anterior pyramids, and lateral columns of the cord. These degenerations may be found without accompanying lesion of the cerebral ganglia; and they are not produced by morbid alterations in other parts of the brain than those about the fissure of Rolando. Similar observations, made during a period of fifteen years, point with much significance to a continuity of fibrous structure throughout this tract. If we remember the uniform progress of discovery already derived from these investigations, first in the nerves, then in the nerve roots, then in the columns of the spinal cord and the medulla oblongata, it is not presumptuous to expect from their future prosecution a corresponding success in the more difficult exploration of the brain.

The study of nervous degenerations has already borne fruit of great value. Like other researches of a similar kind, it was at first a matter of purely scientific interest, without any apparent bearing on the treatment or even the pathology of disease. But it has grown in importance with every additional observation, and it is now acknowledged to be an indispensable aid in investigating the morbid affections of the nervous system. It has extended our anatomical knowledge far beyond its previous limits. It has demonstrated the existence of nervous connections which could hardly have been detected in any other way. It has shown the relation between various forms of paralysis and the altered structure of particular nervous tracts; and it seems likely to yield still further results before its capacity is exhausted. It began with the cicatricial tissue between the ends of a divided nerve, and it has now reached the intricate region of the white substance of the cerebral hemispheres.

(*To be continued.*)

[1] Charcot, Leçons sur les Maladies du Système Nerveux. Paris, 1877. Tome ii., p. 248.

[2] Ibid., p. 11. Leçons sur les Localisations dans les Maladies du Cerveau et de la Moelle épiniere. Paris, 1880, p. 259.

ORIGINAL ARTICLES.

ON THE PHYSICAL DIAGNOSIS, BY MEANS OF PERCUSSION AND EXPLORATION BY PUNCTURE, OF PERITONITIS

WITH AND WITHOUT PERFORATION OF THE ALIMENTARY CANAL, AND THE EMPLOYMENT OF ASPIRATION IN CASES OF PERFORATING PERITONITIS.[2]

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OF the various causes of acute diffuse peritonitis, traumatic and puerperal cases being excluded, the most frequent is perforation of the alimentary canal. It is highly important to recognize this condition at the bedside, in individual cases, for several reasons. One reason relates to the prognosis. The prognosis is extremely unfavorable if there be intestinal or gastric perforation. Another reason has reference to the use of opium in the treatment. In all cases of acute peritonitis, opium is the "sheet-anchor" in the treatment; but there is added a special object in the use of opium if perforation exist. Recovery is possible only by such a degree of induced arrest of peristaltic movements as will allow adhesion to take place at the point of perforation. The practice of

[1] Leçons sur les Localisations dans les Maladies du Cerveau, pp. 156, 166.

[2] Read before the Medical Society of the State of New York, February 8, 1882.

the future may furnish another reason. It may be that laparotomy will be found to be a life-saving operation in some cases. Opening the abdominal cavity, closing the perforation by proper surgical means, and washing out all irritating matters, it is not highly improbable will be a method of treatment sanctioned by its successful employment.

Correlatively it is of importance to be able to exclude perforation, at the bedside, in cases of acute peritonitis. One object of this paper is to invite attention to the proof against perforation afforded by a physical sign, namely, hepatic flatness on percussion. The exclusion of this cause is a ground for a favorable prognosis; it is to be considered in the use of opium in the treatment, and, at a future time, perhaps in deciding upon laparotomy.

Under normal conditions, flatness on percussion extends from about the sixth rib on the mammary line to the site of the lower border of the liver, that is to the level of the false ribs. In cases of perforation of the stomach or of the intestine, gas in greater or less quantity escapes into the peritoneal cavity. The exceptions, if there be any, must be extremely rare. Gas within the peritoneal cavity, the patient recumbent on the back, will separate the anterior surface of the liver from the thoracic wall. This is probably true without exception, provided there be not adhesion of the entire anterior surface of the liver as a result of peritonitis, and adhesion sufficient to prevent the entrance of gas between the liver and the chest-wall is rare. The presence of gas between the anterior surface of the liver and the chest-wall gives rise to tympanitic resonance on percussion. I assume that in cases of peritonitis with perforation, the normal hepatic flatness is always supplanted by tympanitic resonance. This statement is shown by experiments on the cadaver and by clinical observations.

The points which I make are these: If perforation be the cause of the peritonitis, there is more or less gas in the peritoneal cavity; a stratum of gas will then separate the liver and the chest-wall, giving rise to tympanitic resonance on percussion, and, hence, if there be persistence of the normal hepatic flatness, perforation as the cause of the peritonitis may be excluded.

It is only within a short time that my attention has been specially directed to this proof against intestinal or gastric perforation in cases of peritonitis. During this time, however, the following cases under my observation have exemplified its practical application.

In the case of a middle-aged man, seen with Prof. Erskine Mason, of New York, and Dr. Furman, of Tarrytown, the history and symptoms pointed to perforation of the appendix vermiformis of the cæcum. The pain originated in the right iliac fossa; resistance to pressure was felt in this situation, and the abdomen was notably tympanitic. Moreover, the general symptoms denoted so much gravity that a fatal termination was considered as highly probable. Hepatic flatness on percussion, however, was always found, and the recovery of the patient may be considered as rendering it almost, if not quite, certain that there was not intestinal perforation.

A woman of middle age, seen by me in consultation with Dr. Lewis and Dr. Hutchison, of Brooklyn, presented the symptoms of acute diffuse peritonitis, with enormous tympanitic distention of the abdomen. Hepatic flatness was well marked, and on this fact perforation of the alimentary canal was excluded. Death took place within twelve hours after my visit. The autopsy showed the recent passage of gall-stones through an ulcerated opening into the duodenum. Two gall-stones were found in the small intestine. There was no gas in the peritoneal cavity.

In the case of a young women, a patient of Dr. Burrall, of New York, acute diffuse peritonitis was developed in the course of typhoid fever. There was moderate tympanites in this case. Hepatic flatness was found on percussion. The case ended fatally, and there was no autopsy. That intestinal perforation had not taken place, was a fair inference, irrespective of the hepatic flatness, from the absence of the gravity of symptoms which perforation occasions, and from the fact that death did not place for at least a week after the occurrence of the peritonitis.

So far as these few cases go, they show that hepatic flatness on percussion is proof against perforation of the alimentary canal as the cause of an existing acute peritonitis.

A larger collection of cases is desirable, and a motive in submitting a paper at the present time is to interest others in testing the value of this physical proof.

Assuming that hepatic flatness on percussion is proof against perforation of the alimentary canal in cases of peritonitis, it cannot be assumed that tympanitic resonance over the hepatic region is always proof of perforation. The possibility of the colon being pressed upwards, so as to lie between the anterior surface of the liver and the chest-wall, has been demonstrated. But this occurrence is not necessary in order to explain hepatic tympanitic resonance on percussion. It happens not very infrequently that when the transverse colon is much distended with gas, tympanitic resonance is conducted upwards, so as to meet the pulmonary resonance. This conduction upwards of tympanitic resonance from the colon renders the evidence afforded by percussion of the site of the lower margin of the liver very unreliable. If reliance were placed upon percussion, it would be necessary sometimes to conclude that the liver is wanting in its normal situation. This conclusion was actually reached in a hospital case under my observation. The patient had cirrhosis of the liver, with some hydro-peritoneum, and a greatly enlarged spleen. It was reported to me as a case of transposed abdominal viscera, the liver being situated on the left side; and the tympanitic resonance in this case extended upwards to the upper margin of the liver, where it became merged into the pulmonary resonance.

It is not an uncommon error to infer diminution of the size of the liver by measuring, on the mammary line, the distance between pulmonary and tympanitic resonance. On the other hand, per-

cussion is not to be relied upon for determining enlargement of the liver, for the reason that the upper boundary of tympanitic resonance is no criterion for locating the lower margin of the organ. Here, however, we have a resource against the unreliability of percussion, namely, palpation. The sense of resistance to finger-pressure may be relied upon in ascertaining how far the liver extends below the false ribs, and the pulmonary resonance on percussion is reliable as indicating its upper boundary.

In order to show that the presence of air in the peritoneal cavity causes hepatic flatness to disappear, and gives rise to tympanitic resonance over the liver, the following experiment on the cadaver was made by Dr. Stone, House Physician of the Third Medical Division, Bellevue Hospital, at my request, and in my presence. It is proper to state that the experiment was suggested by Dr. Corwin, senior assistant of the division.

The body of a man, six hours after death, presented considerable tympanitic distention of the abdomen. Hepatic flatness was limited on the mammary line to a space about an inch in its vertical diameter. Air was injected into the peritoneal cavity through a small-sized cannula, which was attached to Bowditch's aspirating instrument. The trocar was introduced near the umbilicus. The hepatic flatness quickly disappeared, giving place to tympanitic resonance.

The body of a woman, fourteen hours after death, presented complete collapse of the abdominal walls, and flatness on percussion below the sixth rib. There was considerable rigidity of the abdomen. Air was readily injected into the peritoneal cavity, causing distention and tympanitic resonance over the whole abdomen. The hepatic flatness at once gave place to tympanitic resonance.

In each of these experiments it was difficult to remove the air through the small cannula by pressure over the abdomen sufficiently to restore the hepatic flatness on percussion.

In order to obtain positive proof of the presence of gas within the peritoneal cavity, whenever, in cases of peritonitis, tympanitic resonance extends over the region of the liver, there can be no objection to an exploratory puncture with a small trocar and cannula. The puncture should be made within the hepatic region, lest, possibly, if made elsewhere, the intestine might be wounded. The escape of gas through the cannula is easily perceived by *the touch* and by the odor. Air injected, and allowed at once to escape, acquires an intestinal odor. If desirable, the gas could easily be collected by attaching to the cannula an oiled-silk bag; or it might be aspirated and collected in a glass receiver.

The exploratory puncture thus supplies what is lacking as regards proof of perforation afforded by percussion, and by means of percussion and the exploring trocar, in cases of peritonitis, it may be positively determined whether or not perforation exists. If hepatic flatness on percussion remain, there is no perforation of stomach or intestine. If, on the other hand, tympanitic resonance be found to extend over the region of the liver, all doubt as to the existence of a perforation is removed by an exploratory puncture in that region. It is hardly necessary to add that care is to be taken, in introducing the trocar, not to penetrate the liver; not that the wound will do harm, but because the peritoneal gas will not then escape through the cannula. The liver has not been penetrated if, after withdrawing the stylet, the end of the cannula which has been introduced be freely movable.

A late writer in a standard work on practical medicine (*Ziemssen's Cyclopædia*), says of acute inflammation of the peritoneum, "the only difficult question is whether the peritonitis be with or without perforation. To decide this point, we ought not to rely on any one single well-established physical sign, but make an accurate digest of the entire group of phenomena. Notwithstanding, the diagnosis in some cases must remain undecided." (Vol. viii., p. 208.)

By means of the simple methods submitted in this paper, as it seems to me, the question, whether the peritonitis be with or without perforation, is divested of all difficulty, and may always be decided positively.

It is assumed, in this paper, that the presence of gas within the peritoneal cavity in cases of peritonitis, always denotes perforation of either the stomach or intestine. The question may be asked, is not gas sometimes a result of chemical changes in morbid products within the peritoneal cavity, perforation not existing? Without denying the possibility of gas being thus derived, it is, as I believe, a warrantable statement that the instances, if there be any, are so rare that they may practically be disregarded.

Recovery from perforating peritonitis requires, first, agglutination by means of fibrous exudation, and, next, permanent adhesion, by means of proliferating tissue, to some part with which the intestine or the stomach is in contact at the site of the perforation. It is obvious that the presence of gas within the peritoneal cavity must interfere with this requirement for recovery. Hence arises the inquiry whether the removal of this gas may not prove to be an important measure in the treatment.

Aspiration is probably the safest and best method for the removal of the gas. When air is injected into the peritoneal cavity through a small cannula, its entire removal is not easily effected even by firm pressure over the abdomen. The entire removal is shown by the disappearance of tympanitic resonance over the liver, and this resonance was found to remain after firm pressure, in the experiments on the cadaver which I have related. Moreover, pressure on the abdomen sufficient to remove the gas in cases of peritonitis, would perhaps do more harm than the presence of the gas. Of the different aspirators, I should prefer either my adaptation of Davidson's syringe to thoracentesis, or Bowditch's instrument, for the reason that they are more readily under control, as regards the suction-force, than the aspirator of Dieulafoy. The puncture made by a small trocar causes so little pain that it might be repeated whenever the gas accumulated within the peritoneal cavity; or the cannula, closed by a stop-cock, might be allowed to remain, and aspiration repeated as

often as the resonance over the liver denoted the presence of gas. The aspiration might include the withdrawal not alone of gas but of effused liquid. The removal of the latter is desirable, inasmuch as it may separate the site of the perforation from an adjacent part, and thus prevent closure of the perforation.

In order to demonstrate the possibility of the removal of gas from within the peritoneal cavity by aspiration, the following experiment on the cadaver was made, at my request, by Dr. Thatcher, junior assistant, Bellevue Hospital: A trocar was introduced in the region of the iliac fossa and attached to Bowditch's aspirator. The injection into the peritoneal cavity of the air contained in the syringe twice, was sufficient to substitute tympanitic resonance for flatness in the hepatic region. Afterwards the trocar was introduced over the liver, and, by suction with the instrument, the tympanitic resonance was made to disappear and give place to the hepatic flatness which existed before the injection of air.

THE SIGNIFICANCE OF PAIN REFERRED TO THE EAR.[1]

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SURGEON TO THE MANHATTAN EYE AND EAR HOSPITAL, NEW YORK.

IT is notoriously difficult to estimate accurately a subjective symptom, but pain takes a high place in the important testimony given by the patient himself. It brings with it so many objective signs in the expressions of the face, and the gestures, and in the play of the emotions, that we all attach much importance to it as a diagnostic symptom. When we have made all due allowance for the nervous disposition which exaggerates the least pain until it is described as unbearable; when we have noted the delicacy or pusillanimity of temperament which tolerates no discomfort, we still find in pain an important indication of the true state of the organ supposed to be diseased. The symptom of pain in the ear is no exception to this rule. We may find in it, perhaps, much that is significant and suggestive. If the Society will grant me their indulgence for treating of a somewhat commonplace subject, I will venture to formulate the suggestions which are made by the discovery of the existence of pain in the ear. It is the symptom commonly known as earache.

1. *Foreign Bodies in the External Auditory Canal.*—The entrance into the external auditory canal of a living animal, such as an earwig, or the generation of a maggot in the same part may, and generally does, cause severe pain. The diagnosis of the cause in this instance is easy. Ocular inspection will determine it in a few seconds. The means of relief are simple. Syringing with warm water, or filling the canal with fluid, will readily remove the insect. As to the maggot, it will be necessary to kill the grub by the use of such an agent as Labarraque's solution, or by the vapor of chloroform, before it can be removed by syringing.

Inanimate foreign bodies, which are generally placed in the ear by children, or irresponsible adults, do not usually cause pain, unless they have been pushed down into the canal, so as to press upon its sensitive integument or upon that of the drumhead. Nor is there any danger unless this has occurred. This is a hint to us to avoid haste and severe means in removing such an offender.

Impacted wax, in a few cases, causes severe pain in the ear. The diagnosis here is also perfectly easy, and the means of relief ample. In the majority of cases, inspissated cerumen, while a foreign body, may cause tinnitus and impairment of hearing, it does not produce pain. In the cases which I have seen where pain occurred, there has been an inflammation of the integument of the canal, so that the wax has been glued, as it were, to it; or it has pressed upon the drumhead. This pressure upon the membrana tympani, from a plug of hardened material, may not occur until the wax has remained in the canal for months. I have long thought that the cause of impacted cerumen is to be found in an inflammation of the canal, and that the inflammation, if such there be, causes a swelling and adhesion of the epidermis, perhaps of the integument itself, to the cartilage or periosteum of the canal. It is in these cases where the inflammatory origin is decided, that I have seen pain particularly prominent as a symptom. As I have already indicated, this particular condition is a very rare one.

2. *Furuncles and Diffuse Inflammation of the External Auditory Canal.*—The pain from furuncles or from diffuse inflammation, is very often extremely severe. But it may usually be distinguished from that caused by inflammation of the middle ear, even without ocular inspection, although I am far from advising any one to thus venture a diagnosis.

Unfortunately, pain from an inflammation of the canal, is not so easy of immediate relief as is pain from the more deeply-seated and dangerous lesion. An inflammation of the canal may extend to the auricle and to the superficial tissues of the mastoid process. An inflammation of the connective tissue and perichondrium of the auricle, is extremely painful, and I know of no adequate means for its immediate relief. It is fortunate that it is rare.

But even when this occurs, the pain from an inflammation of the canal is not to be compared with that from a true periostitis of the mastoid process, or to that from an inflammation of the little tympanic cavity. In rare cases it is probable that the inflammation of the canal becomes periostitis by direct extension, and in such instances the pain will be very severe, but the means of relief are sufficient. An incision which divides the inflamed periosteum, will give it in a few moments. A periostitis of the canal cannot be distinguished by the character of the pain from a periostitis arising from an inflammation of the middle ear. The extension from this part is as dangerous as the extension from the tympanic cavity, and, as I have said, the pain from furuncles or diffuse inflammation of the canal is not so easily relieved as the same symptom arising in the course of the more serious inflammation of the tym-

[1] Read before the Medical Society of the State of New York, February 9, 1882.

panic cavity, Eustachian tube, and the mastoid cells.

The probable consequences of an inflammation of the canal, either diffuse or circumscribed, are not serious; and we may not be troubled as to the future of the patient's hearing, even though we are not able to promptly relieve the pain. The means upon which I rely for the *mitigation* of the pain from furuncular or diffuse inflammation of the canal are, 1, the warm douche, and the use of steam; 2, poultices applied behind and in front of the ear, and *in* the meatus; 3, incision of the inflamed tissues; 4, the administration of some preparation of opium.

Large poultices enveloping the auricle, as has been long since shown, are apt to set up chondritis, a tedious disease of the auricle, and they may also cause granulations to rise in the auditory canal. Some times the warm water acts like a charm to quiet all the pain from this form of inflammation. It should be used by means of a fountain syringe, or Fayette Taylor's douche, or any other siphon arrangement which may be at hand. The ordinary syringe will never be of any value in the application of the douches. The stream must be continued without interruption for a long time, in order to mitigate pain. When the warm douche fails, poultices, applied as I have stated, will sometimes accomplish very much; and when all these fail, a free incision through the swollen tissues down to the bone in the osseous canal, and well into the cartilage in the cartilaginous, will cut off the severity of the attack. But in many of the tedious cases all these agencies but mitigate the symptoms until the proper conditions of life replace the improper ones under which this disease originated, and tonics, change of air, and time have wrought a cure unmarked by relapses. It is an interesting clinical fact that leeches are usually of no avail whatever in furuncles of the auditory canal, and of very limited value in diffuse inflammation, important as their use is in subduing the pain of severe inflammations of the middle ear.

I have carefully studied all that is claimed for sulphide of calcium in subduing pain in this part of the ear, and I have occasionally administered it to prevent frequent relapses of furuncular inflammation, but as yet I see no reason to change my opinion that the exhibition of such drugs as a means of relief for pain caused by local swelling and tension in an inaccessible part, inaccessible as to the relief of tension, is simply a *renaissance* of the exploded tenets of one of the sects in medicine.

Pain in the ear from external inflammation is much more rare than from a morbid process in the middle ear. From the character of the pain alone it would be very difficult to make a diagnosis, and yet it may be said, in general terms, that pain from inflammation of the middle ear may be distinguished from that from boils or from that *rara avis*, otalgia, by its general characteristics of intensity. The pain from the serious disease of the middle ear is often agonizing and overwhelming, continuing without interruptions of composure, while that from furuncles and otalgia is comparatively bearable.

3. *Disease of the Middle Ear, that is to say, of the Tympanitic Cavity, Eustachian Tube, and Mastoid Process is a prolific cause of Pain.*—This pain, when intense, is a serious symptom. The well-being, often the life, of the patient, may be involved in its proper interpretation. If it be intense and arise from pressure in the tympanic cavity or the mastoid cells, from tension of the infiltrated periosteum, or from pressure by swelling of the Eustachian tube, no drugs, not even doses of opium, or its preparations, much less any of the recently recommended medicines, such as sulphide of calcium and pulsatilla, will be of any avail at all, until nature or mechanical means, such as leeches and the knife, and inflation of the stopped-up chambers have evacuated the pus or mucus, disgorged overfilled bloodvessels, or divided the tensely stretched membranes.

Slight pain is readily relieved by the warm douche and by poultices. Those who believe in the mysterious virtues of drugs in preventing maturation may add them to the mechanical means in these cases. But in the mild forms of middle-ear inflammation they are unnecessary, and in the severe ones wholly useless. Confinement of the patient to a warm room, promotion of the moisture of the skin, perfect tranquillity of the body, will be found necessary adjuvants in the treatment of pain from disease of the middle ear, while these things will accomplish very little, if anything, in relieving that from boils.

The means for determining the origin of pain in the ear are ample, and yet as we all know, perhaps, the conclusion is often hastily reached that the disease from which it arises is one of the canal and not of the middle ear. A serious disease is thus mistaken for one which is unimportant by comparison. It may be, in the opinion of your speaker, taken almost for granted that severe earache, in ninety out of every one hundred cases, is caused by inflammation of the middle ear. I would adopt means for its relief as follows: 1, the warm douche; 2, leeches. These will scarcely ever fail in cases seen within one or two hours of the beginning of the pain. Sometimes, however, nature anticipates any ordinary surgical assistance and relieves the case by the bursting of the enlarged bloodvessels through the membrana tympani within an hour of the beginning of the attack. [Otitis media hæmorrhagica.]

But even if the pain has existed for days, the proper action of leeches will cut it off, often before the leeches have dropped from the tragus of the mastoid, while the warm douche will complete the cure.

I have been speaking of severe pain, of pain which prevents sleep even though powerful anodynes are used, pain which causes the bravest man to groan with agony or writhe with restlessness in this unintermittent disease. The pain from periostitis of the mastoid is also relieved as readily as that of tension of the tympanic cavity, if seen early, by leeches, by poultices; and if seen late, by division of the tissues down to the bone.

There is much disease of the middle ear, active though it may be, which is not characterized by great pain, and in which the beneficent power of time and nature will accomplish a great deal. The wise observer will carefully discriminate between

severe cases and those which need mild treatment. But that form of disease characterized by the pain which I have endeavored to describe, will sometimes, nay, often, work destruction of the organ of hearing, and even cause the loss of life, if not relieved at once. When it occurs it cannot be trifled with, and, as yet, no means have displaced those known as local antiphlogistics.

4. *Otalgia.*—Pain in the ear of a severe type, and lasting but for a second at a time, sometimes occurs in the course of chronic non-suppurative disease of the middle ear. The symptom is not an important one. Such pains do not interfere with the usual health of the patients unless they are anæmic or hysterical. What may be called typical otalgia, that is, pains in the ear without apparent lesion, rarely occurs. When it does, it may depend upon carious teeth, or upon rheumatism or syphilis.

In closing this essay upon the significance of pain in the ear, I venture to state, whatever æsthetics may owe to Mr. Oscar Wilde, humanity remains under great obligation to his father, the great Irish Baronet, who, some thirty-five years ago, first plainly drew the line between the extremely rare affections of the ear, which may be denominated nervous, and those which are of an inflammatory character. He plainly indicated to us the importance of leeches, and of division of the periosteum for the relief of serious pain in the ear.

The debt which we owe him was increased by that due to Hermann Schwartze, of Halle, for having revived the operation of paracentesis of the membrana tympani in cases of over-distention of the tympanic cavity. These means remain, as yet, unsupplanted for the relief of the symptom which is generally caused by what may be called mechanical influences. He who discards them in the proper cases, does so at the peril of the integrity of the organ of hearing, perhaps even to the life of his patient; true though it be, that one may escape from even such peril after weeks of unnecessary suffering, with neither damage to his hearing nor loss of life.

MEDICAL PROGRESS.

HYDRATE OF CHLORAL IN ACUTE GASTRO-ENTERITIS IN CHILDREN.—Dr. ADOLPHE KYELLBERG (*Nordesk Med. Arkiv.*, Bd. IV.) concludes that the principal cause of difficulty in treating this affection is the great irritability of the stomach, and that hydrate of chloral serves better than any other drug to check the violent vomiting by which all medicines and foods are rejected, and besides soothing the child, will often help to arrest diarrhœa. He administers it in the form of an injection, preferably after the bowels have been moved, in doses of 25 to 30 cgrms. for children of from five to six months old, and from 50 to 60 cgrms. to children of twelve to fifteen months of age, only a dessert-spoonful of fluid being used. The enemata may be repeated two or three times daily, if required, the doses also being increased, if they appear to be too small, or it may be associated with other drugs, such as iced champagne or brandy for the vomiting, opium internally or as an enema for the diarrhœa, warm baths with mustard for albuminuria, if present, and stimulants for collapse. Finally, to increase the effect of the chloral, the author is accustomed to add 1 grm. of the *tr. thebaica* to the enema, and when stimulants are required, 5 to 15 drops of Hoffman's anodyne.—*Journ. de Méd. de Paris*, Dec. 24, 1881.

EXTRA-UTERINE PREGNANCY: EXPULSION OF THE FŒTUS BY THE RECTUM: CURE.—On the 19th of December, 1879, Dr. BULTEAU was called to a woman suffering from terrible abdominal pains and continuous vomiting; her face was contracted, pulse small, and abdomen distended and painful in the left iliac fossa. The patient was thirty-three years old, had generally been in good health, and had had a miscarriage six years previously, since when her menstrual periods had been irregular. A diagnosis of pelvic peritonitis was made, and the symptoms disappeared under treatment with opium, an irregular tumor, however, remaining in the left iliac fossa. The general health continued to fail, vomiting persisted, and it was thought at one time that there existed a cystic sarcoma of the uterine appendages. Several months later the patient had an abundant sanguinolent diarrhœa, after which the tumor diminished considerably in size, and one month later, a femur of a fœtus of eight months was passed by the anus, and at different intervals all the other bones of the fœtus escaped by the same means. Ten months after the commencement of these deliveries the patient had entirely regained her health.—*Union Méd. du Nord-Est*, Oct. 15, 1881.

THE TRUE VALUE OF NERVE-STRETCHING IN THE TREATMENT OF THE PRINCIPAL SYMPTOMS OF LOCOMOTOR ATAXY.—At the congress of German naturalists, held in Salzburg, last September, the question of the value of nerve-stretching in locomotor ataxy was thoroughly discussed, and all were agreed that, after a transient stage of amelioration, the disease advanced unchecked. This opinion has since been confirmed at the meeting of the Verein für innere Medicin of Berlin, held on the 31st of October, when Drs. Bernhardt, Leyden, Litten, Goldammer, and Israel cited numerous facts which placed the conclusion beyond doubt, that elongation of the great nerve-trunks in locomotor ataxy can lessen the darting pains for a few weeks, and renew cutaneous sensibility and equilibrium; but the pains, driven from their original seat, appear in the trunk, the loss of equilibrium is soon more marked than before, and the skin again loses its sensibility.—*Deutsche Med. Woch.*, Nov. 19, 1881.

AN IMPROVED VAGINAL TUBE.—J. HOCKS (*Centbl. f. Gynäkol.*, No. 19, 1881) draws attention to the occurrence of uterine colic with sickness, etc., from the use of the vaginal douche, which he attributes to the introduction of either air or fluid into the uterine cavity, in cases where, either from retroversion or gaping of the os, the end of the vaginal tube may have accidentally lain directly opposite the opening of the cervix. He recommends the use of a spindle-shaped tube, which at its farther end divides into two smaller tubes, these, however, becoming again continuous, thus inclosing an oval space about one and a half inches long. The injection escapes by means of perforations on the inner aspects of these smaller tubes, and the end of this instrument, if introduced into the cervix, will effectually plug it. In regard to the use of the douche during menstruation, the writer states that by using such a tube, and thus preventing the possibility of fluid entering the naturally gaping cervix, and by carefully assimilating the temperature of the water to that of the body, not only is there no danger, but better results are obtained than during the inter-menstrual period.—*Edin. Med. Journ.*, Jan., 1882.

TEMPERATURE OF ACUTE ABSCESS.—M. ASSAKY has recently undertaken some experiments under Prof. Gosselin's direction, to determine by direct measurement, the temperature at the seat of suppurative inflammatory action of acute abscesses in one hundred and twenty-three cases, and compare it with the local temperature of other parts of the body. M. Assaky found:

1. The temperature in the interior of an acute subcutaneous abscess, wherever located, or whatever the age or constitution of the patient, varies from 99.5° to 101.3° Fahr.

2. The cutaneous temperature over the seat of the abscess is always from 0.9° to 4.5° higher than that of a corresponding point on the opposite side of the body.

3. The localized elevation of temperature tends to disappear as the abscess approaches cure: the course of the temperature of the abscess is independent of that of the general body-temperature.—*Gaz. Méd. de Paris*, Dec. 3, 1881.

PARAMYOKLONUS MULTIPLEX.—Under this name Prof. FRIEDREICH describes (*Virchow's Archiv*, December, 1881,) a case of clonic contractions of a number of symmetrical muscles of the lower and upper extremities. The patient, a man aged fifty, the subject of cirrhosis of the right lung, presented the following symptoms. There were short, quick, rapidly-recurring contractions of the biceps, triceps, and supinator longus of the arms, and the vastus rectus femoris, adductors, biceps femoris, and semitendinosus of the thighs. No other muscles of the extremities or trunk were involved. The contractions were not fibrillar, but affected the entire muscle, causing it to swell and harden. They were not always forcible enough to move the limb, though sometimes the arm would be flexed by the biceps, or the hand supinated by the action of the supinator. The contractions were not rhythmical, but separated by irregular, brief intervals. Though symmetrical muscles were affected, each contracted independently. When in action, a sound could be heard with the stethoscope resembling the first sound of the heart. The frequency and intensity of the contraction varied in a quiet state, 10 to 20, in a most active, 40 to 50 per minute. Occasionally they would cease for one-quarter to one-half an hour. Sometimes the contractions would follow each other with great rapidity, and the muscle would pass into a state of tetanus, lasting for a few seconds and accompanied by pain. As a rule, they were strongest and most frequent when the patient was at rest in the evening, and would at times cause pain enough to prevent sleep. Not infrequently he was aroused from sleep by a painful cramp of the muscles of the legs, which would then be drawn up towards the abdomen. During sleep the movements stopped. When patient made voluntary movements or used the limbs actively, the contractions ceased, so that they did not interfere with his work. The power of the affected muscles was not impaired. Electrical excitability, to both currents, normal; mechanical excitability also natural. On the other hand, the reflex excitability was decidedly increased. Even exposure of the limb to the cool air intensified the contractions. Pinching the skin or other stimuli acted in the same way. No ankle clonus, but the patellar reflex was greatly exaggerated. All of these phenomena, the spontaneous contractions and the increased skin and patellar reflexes, were much more marked on the right side. Sensibility normal. No vaso-motor or secretory disturbances. No atrophy of affected muscles. No cerebral or papillary symptoms.

Patient attributed the trouble to a severe fright which he had received five years before; he became pale and had a sensation of rigidity of the entire body, which recurred in a quarter of an hour. Fourteen days after he first noticed the twitching, which gradually became more intense, and lasted up to the date of his admission, on 29th of April, 1880. Under galvanism the frequency and intensity of the movements rapidly abated, and in a few days entirely disappeared.

Prof. Friedreich believes that a local muscle or nerve affection could be excluded, and explains the symptoms on the view of increased excitability in certain groups of nerve cells in the anterior horns of gray matter of the cord; not of the nature of an inflammatory state, but rather a functional disturbance.

With regard to the etiology, it had no connection with the chronic lung trouble, but would appear to be directly related to the fright, so that it may be regarded as a remarkable and peculiar form of *fright neurosis*.

SALICYLATED STARCH IN ECZEMA.—KERSCH (*Wiener Med. Blatt.*, No. 1, 1881) strongly recommends salicylated starch in the treatment of eczema. It is prepared by gradually mixing small quantities of pure starch with a 2 to 3 per cent. alcoholic solution of salicylic acid. When the starch has settled, the quantity of the solution present should be sufficient to furnish a layer over it. The residual solution should then be poured off, the salicylated starch pressed in stout muslin, and dried at a temperature of 176° Fahr. The eczematous patches are first deprived of their scales by the use of a 2 per cent. solution of carbolic acid and potash soap, then dried with absorbent antiseptic cotton, subsequently moistened with a 2 per cent. alcoholic solution of salicylic acid, and then thickly covered with the salicylated starch. The remedy, even allowing for Kersch's enthusiasm, seems to have acted well, and is worthy of more extended trial.—*Dublin Journ. of Med. Science*, Nov., 1881.

VENOUS CONGESTION AND CIRRHOSIS OF THE LIVER IN DIABETES.—M. LECORCHÉ draws the following conclusions from an essay on this subject:

1. Congestion of the liver is usually, if not invariably, found in the course of diabetes; it is dependent upon the excessive functional activity of this organ, which itself is the cause of the disease.

2. Atrophic cirrhosis of the liver exists merely as a coincidence with diabetes, and can be only indirectly due, according to the author, to the congested state of the organ. He believes it to be due to the large amount of liquid consumed by diabetics.—*L'Union Méd.*, Dec. 29, 1881.

KOUSSO RESIN.—Prof. ARENA (*Prak. Arzt., No. 3*) states, in regard to the action of fresh and old kousso as a vermicide, that this substance loses its activity by keeping, and this is due to the alteration in the resin, which is the active principle. The fresh resin is green, with a somewhat bitter and unpleasant taste. The old resin is yellow, and without bitterness.—*Practitioner*, Jan., 1882.

FORCED ALIMENTATION IN PHTHISIS.—Dr. DESNOS points out a number of inconveniences or accidents which may follow the use of forced feeding as recommended by M. Debove, of which the following is a summary.

The method can produce intolerance of the stomach and painful cramps, which may be sufficiently severe to necessitate the abandonment of forced feeding. On the other hand, this intolerance may, in certain cases, be overcome by introducing the fluid very slowly and intermittently, and in smaller quantities than usually advised. It is advisable to select the periods when fever is absent for the administration of the food, and in cases where milk causes uncontrollable diarrhœa, another article of food must be selected.—*Bull. Gén. de Thérapeutique*, Jan. 15, 1882.

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SATURDAY, FEBRUARY 11, 1882.

NATIONAL PUBLIC HEALTH LEGISLATION.

I. THE ADULTERATION OF FOOD AND DRUGS BILL.

AMONG the four thousand odd hundred bills which have been already introduced into the present Congress, there are several which are of special interest to physicians and sanitarians. At present we propose to remark upon but one of them, reserving others for future examination.

We say but one, although there are three bills relating to the adulteration of food and drugs noted in the Record, namely, H. R. 1039, introduced by Mr. Hardenbergh, of New Jersey; H. R. 1080, introduced by Mr. Flower, of New York; and S. 649, introduced by Senator Miller, of New York. A very slight examination, however, shows that these bills are identical in all respects, each being, in fact, a copy of the bill prepared and presented towards the close of the last Congress under the auspices of the National Board of Trade.

The essential features of this bill may be summed up as follows: It forbids the introduction of adulterated food or drugs into the United States or their transport from one State to another. It forbids the manufacture or sale of adulterated food or drugs in any territory, in the District of Columbia, or in any fort or navy-yard or other place under the exclusive jurisdiction of the general Government. It leaves to each State the matter of regulating the manufacture or sale of adulterated articles within its own borders. The scope of the bill will be found in the abstract of it given in another column.

It is provided in the bill that the National Board of Health shall, from time to time, fix the limits of variability permissible in any article of food, drug, or compound, the standard of which is not fixed by any national pharmacopœia. It will be seen from this proviso, in connection with those in the seventh clause of the bill, that the National Board of Health is to fix the standard of composition in cases where this is not done by the pharmacopœia, and that the operation of the law is made as it were tentative, and given a certain amount of elasticity by avoiding the fixing of details and leaving them to be changed by the Board as circumstances require. This is still further provided for by section 5 of the bill.

The first question to be considered in regard to this proposed legislation is, is there sufficient need for it? It certainly seems to us that there is. The investigations made under the direction of various Boards of Health, State and National, show that the art of adulteration, and selling things under false names, is practised to a very large extent. So far as food is concerned, this matter is of more importance to honest dealers and manufacturers who have to compete with adulterated goods, and to contend in foreign markets against the bad reputation of our products produced by such adulterations, than it is from a sanitary point of view. But so far as relates to the adulteration of drugs, all physicians know the uncertainty of their prescriptions depending upon the uncertainty of the strength and purity of the materials used in compounding them. The evil has long been recognized, and is on the increase. It is true that in our large cities, through the organization of pharmacists, much has been done to remedy it, and that the physicians in such cities can always obtain reliable preparations by selecting his apothecary; but it is also true that a vast amount of weak, impure, and adulterated drugs is annually disposed of in this country upon physicians' prescriptions, and that the results from this are sometimes dangerous—the more so because they are often the unsuspected cause of failure to secure the hoped-for results from remedies ordered. Nor does it seem to us probable that this matter can be corrected by State laws alone, although undoubtedly these are also necessary.

Granting the necessity for a United States law, the bill we have described seems well calculated to secure its purpose. There must be some authority to fix the standards of purity and to exercise discretion, so that there shall be no unnecessary interference with legitimate industry. The National Board, with the aid of the expert advice which it would call in, seems the best authority available for the purpose; it would act with a due sense of responsibility, and may, we believe, be trusted to proceed cautiously and tentatively in the matter. It is not probable that the law will be found satisfactory in all particulars; but, at all events, it will be in the

power of the Board to prevent it from doing harm until the changes which experience may show to be necessary shall have been made.

ANIMAL VACCINATION.

IT has been stated that the protection afforded by vaccination against small-pox is much less complete in recent years than it was in the days of Jenner. Prof. Cameron, of Dublin, has recently called attention to the fact that, in the epidemics of Rotterdam, Montpelier, and Edinburgh, occurring between 1818–23, the mortality among a large number of vaccinated persons attacked was only about 1 in 330 cases; while among the many cases treated in the London hospitals during the epidemics of 1870–79, 1 in every 10 of the vaccinated died. So, also, in the epidemics in the United States in the years 1871–73, the results of the operation were not as satisfactory as might have been expected, although animal vaccination was then beginning to be practised to a very considerable extent. A careful analysis, made by Prof. Cameron, of over 15,000 cases recorded in London in 1852–67, and at periods between 1871 and 1879, shows a marked falling off in the protective power of vaccination, *as measured by the death-rate*. This falling off in the results has been attributed by the advocates of animal vaccination to the deterioration of humanized virus by transmission through a countless number of subjects. The virus is thought to have become attenuated to a degree that has deprived it of much of its original protective influence. To remedy this assumed defect, and restore to the operation the fullest measure of efficiency, it would seem most natural and judicious to return to the original source of the virus, and substitute animal vaccination for the method hitherto almost universally employed, unless provided with virus from lymph or crusts possessing unquestionably the characteristics of true Jennerian virus.

Another reason, of some weight, for the practice of animal vaccination, is to avoid all possibility of transmitting human disease, though authenticated cases of this means of infection are excessively rare.

Animal vaccination is now practised very generally in the United States, but the results of the innovation are not altogether satisfactory. The fault is not with the system, but in its practical application. "Pure and unadulterated" animal virus, judiciously introduced into the system, must confer every possible protection. But the virus supplied from the numerous vaccine farms throughout the country is so often inert or impure from admixture with blood, pus, or other foreign substances, the result of careless or reckless manner of collection and preparation, or, if originally unobjectionable, the uncertainty of its activity when it arrives in the hands of the physician, is so great that confidence in its reliability is apt to be shaken. Resort should, therefore, be made, whenever possible, to virus but few removes from the calf, as being more trustworthy and reliable.

To prevent failure, and to obviate this growing distrust, it would appear incumbent upon the Government or State authorities to organize vaccine farms under their immediate supervision, and this office might, with propriety, be assigned to the National or State Boards of Health. From these sources, a reliable and adequate supply of material could be obtained at all times. If this method were pursued, every possible objection to animal vaccination would disappear, and its advantages would be more universally recognized and applied. The danger of inoculation of human disease, though hardly possible where proper prudence and care are observed, is entirely avoided by the use of bovine virus. A more complete confidence in the operation is established, as is indicated by the greater willingness of the public to have vaccination performed when it is used. Then, again, there need never be any scarcity of supply, as so frequently happens when depending entirely upon the humanized stock.

THE LESSON OF MEMPHIS.

IN another column appears a letter from Dr. R. B. Maury, entitled "Memphis — its Sewers and its Health," which is of much more than local interest. It will be remembered that immediately after the end of the yellow-fever epidemic of 1879 a sanitary survey was made of the city of Memphis, under the auspices of the National Board of Health, by a Commission composed of Drs. Billings, Mitchell, and Folsom, Major Benvaurd, U. S. Engineers, and Col. George E. Waring. This Commission advised a change in the source of supply for the water-works; the introduction of a system of sewerage to discharge into the Mississippi River; a system of subsoil drainage; the keeping the bayous free from contamination; the condemnation and destruction of certain buildings, etc. The system of sewerage has been introduced, but it does not discharge into the Mississippi; it has been turned into Wolf River a few hundred yards below the water-works. The bayous have not only not been kept free from filth, but the sewers have been allowed to overflow into them. Only such subsoil drainage has been introduced as was immediately connected with the sewers laid — an amount altogether insufficient, as Dr. Maury remarks, to secure good drainage. And the source of the water supply has not only not been changed, but fresh sources of impurity have been brought to it by the sewers. It is not to be wondered at that the mortality has rather increased than diminished; that the deaths from dysentery have doubled, and that the death-rate from consumption

is higher than it is on the bleak New England coast; on the contrary, it is rather surprising that the mortality has not been greater. The system of water supply of a city, and its sewerage, are two factors which must be considered together. To bring water in large amount into a city, and make no provision for its removal by sewers after it has been fouled by use, brings on soil pollution; to provide sewerage without an adequate water supply, or without the arrangements necessary to prevent deposits, is to establish a manufactory of offensive and dangerous gases; and to so arrange matters that the sewage, after having been conducted out of the city, shall contaminate its water supply, is certain, in the long run, to produce disease.

Moreover, in a city like Memphis drainage is quite as important a matter as sewerage, and we do not think that Dr. Maury puts the case too strongly when he says that "*we may not reasonably look for much improvement in our death-rate until our drainage is radically improved.*" We would add to this that ventilation must be provided under houses. If they are built without cellars or ventilation, the floors being but a few inches above the damp earth, as is the case with many dwellings in Memphis and New Orleans, it will not be possible to reduce the death-rates from consumption and other forms of lung disease to the point which they ought to occupy in those climates. And this matter of soil-drainage is one that must be carefully considered in deciding on the merits of the small water-tight pipe system of sewers. We believe that for many places this system is an excellent one, *if a drainage system is provided with it*, but the case of Memphis shows that there is great danger that it will not be provided.

We hope that other cities will heed the warning, and that the authorities of Memphis will go on and properly complete their work, and thus prove by actual trial the wisdom of the advice given them by their sanitary commission two years ago.

NAPELINE.

The remarkable properties of aconite, as a remedy for the inflammatory state, as an anodyne, etc., are not possessed in their entirety by the alkaloid aconitine. The explanation of this variation is obvious. Aconite contains several kinds of aconitine—crystallized and amorphous, and *pseudo-aconitine*, which also exists in the two forms, crystallized and amorphous. The aconitine of commerce varies much in purity, the most highly esteemed being Morson's and Duquesnel's. In 1857, Hübschmann discovered in the root of aconitum napellus a new alkaloid, which he named *napelline*. Recently Duquesnel has isolated an alkaloid from the same source, which he designates *napeline*. It is probably the same as that discovered by Hübschmann, one *l* being omitted to give variety. Duquesnel's napeline has been lately studied by Laborde, who has conducted an experimental and clinical investigation. He finds that this new alkaloid differs in many respects from aconitine: it is less active, and has more decided hypnotic and calmative properties. Napeline causes quiet and profound sleep, similar to that caused by narceine. The first trial of it in man was in the case of a neuropathic individual, fifty years of age, attacked with neuralgia, which resisted all the well-known anodynes and antineuralgics. A decided soporific effect was produced by two doses of three and four centigrammes respectively ($\frac{1}{3}$ and $\frac{2}{3}$ grains), and there were no unpleasant after-effects. M. Dumontpallier has used *napelline* with success at Pitie in three cases of neuralgia—one of sciatica, one of facial neuralgia, and one of wandering neuralgia. Laborde finds that this remedy is indicated in neuralgia, persistent insomnia, and in general hyperexcitability of the nervous system. If it be found on further trials to possess the virtues claimed for it by M. Laborde, it will take place amongst our most valuable remedies, and afford another conclusive reason for the belief in the utility of aconite.

BEEF-TEA A STIMULANT, AND NOT A FOOD.

Notwithstanding it has been repeatedly shown that beef-tea is not a food, the laity, and to a considerable extent the profession, are slow to be convinced. That patients fed on beef-tea slowly starve is a fact, which the analysis only too conclusively supports, and which is sustained by accurate clinical observation. In the *Lancet* for October, 1880, p. 562, Mr. G. F. Masterman publishes an analysis, which shows that beef-tea has a chemical composition similar to urine. Beef-tea, most carefully prepared, says Dr. Neale in a recent issue of the *Practitioner* (November, 1881), does not contain, including alkaline salts, more than from 1.5 to 2.25 per cent. of solid matters, and such matter is mainly composed of urea, kreatin, kreatinin, isolin, and decomposed hæmatin. As a stimulant, beef-tea may be, and often is, highly serviceable, but as a means of support during the exhausting drain of a long illness, it does not compare in nutritive value to milk. Dr. Lauder Brunton raises the question whether beef-tea, a product of muscular waste, may not under some circumstances be actually poisonous!

THE SALICYLATES IN RHEUMATISM.

Statistics, to show the exact value of the salicylates as remedies in rheumatism, continue to appear in the English medical periodicals. In our last issue we referred to the paper of Dr. Hood in the *Lancet* of December 31, 1881, in which were tabulated twelve hundred cases of rheumatism, treated with

and without the salicylates, in Guy's Hospital. In the issues of the *Lancet* for January 7 and 14, 1882, there appears a statistical report from Dr. Sidney Coupland of cases of rheumatism treated in the Middlesex Hospital with salicylate of soda. The conclusions derived from an examination of these tables agree in the main with those heretofore published. Dr. Coupland finds that in the majority of cases salicylates speedily reduce fever and diminish the articular pains. Unless the remedy is continued for some time after the subsidence of the fever and pain, relapses will occur. All the reports agree that relapses are apt to take place even when the salicylates are kept up, and may be occasioned by indiscretions on the part of the patient. It is agreed also that these remedies do not prevent cardiac complications. Their actual value consists in the relief which they afford to the pain and fever, but they do not materially lessen the period of confinement necessary. Toxic symptoms are produced by them in a small proportion of the cases.

In the same issue of the *Lancet* we find some remarks of Dr. Maclagan on the administration of salicin and salicylates. He is the apostle of salicin, as our readers have been informed. He maintains that this is superior to the others because it has no injurious effect—a matter of much importance since this remedy must be used in the maximum doses. "Salicin is equally powerful as an anti-rheumatic, but it produces none of the deleterious effects of the salicylates," says Dr. Maclagan. Amongst the "disastrous effects" charged to the action of the salicylates are, according to Maclagan, "delirium, insanity, prostration of the vital powers, syncope, and even death." We need now some satisfactory evidence as to the value of salicin. This is in part afforded by Dr. Maclagan, who appends a report from thirty-nine hospitals of Great Britain. In most of these salicylates are used, but in the Glasgow Royal Infirmary, Glasgow Western Infirmary, and in the Dundee Infirmary, salicin is preferred. In the first named, the report from Prof. Charteris is that salicin and salicylates are "invariably satisfactory," but "preference is given to salicin over salicylates." In the second, the report by Prof. Gairdner is, "have always favored salicin as *versus* salicylates. Have not found it produce any unfavorable symptoms." In the third, the report from Dr. Maclagan says, "salicylates often caused gastric and cerebral disturbance; salicin produced no unfavorable results, and was equally potent."

As salicin is insoluble in water, and must be given in large doses, the question of administration becomes important. Doubtless, the best method is to enclose the powder in capsules, but it may be suspended in mucilage.

ENGLISH PIRACY.

IN our youth we remember the story of a pious preacher who with even perspiring zeal used to give the fiercest thwacks to the ancient Jews, going even so far as to "name" not a few like Ahab and Jezebel, but he was most tender and judicious in avoiding all allusion to the wicked deeds of the merchant princes and speculators who atoned for the sins of six days on 'Change by hanging on his eloquent lips on the seventh.

Our esteemed contemporary, the *Lancet*, seems to have somewhat of the same wise discernment in perceiving sins three thousand miles away, while it is blind to those which exist at its elbow. In the issue of January 7, it begins an article thus, "We have so often protested against the disgraceful practice of pirating English medical books by American publishers and editors, etc." Now it so happens that in the most flagrant case of English piracy of American books that we wot of, the *Lancet* was dumb, and further, although the attention of the editor was specifically called to the matter, he neither published the letter nor alluded to the fact. The "American Health Primers" were published two years ago in Philadelphia. Six of the twelve were republished by Ward & Lock, of London, under the new title of their "Long Life Series." Not only was no honorarium ever offered to the authors (as respectable American publishers usually do in the case of English authors), but their *names were actually erased from the title-pages*. Nay, more; the text was most carefully "edited" so as to cut out everything indicative of their American origin, and the series purported to be "written and edited by distinguished members of the medical profession," which, of course, would mean in England that they were of English origin. In our issue for December, 1880, we called attention editorially to the fraud practised on men like H. C. Wood, Burnett, Cohen, Richardson, Harlan, and White, yet the *Lancet* had no word of condemnation, and even a letter and a copy of one of the pirated books failed to disturb its equanimity.

Not long since the *Edinburgh Medical Journal* exposed the piracy of Dr. G. R. Cutter's *Dictionary of German Terms used in Medicine*, by Dr. Fancourt Barnes, of London, yet the *Lancet* had no "protest," such as its present zeal would suggest would have been at least consistent as well as eminently just.

THE NEW YORK STATE MEDICAL SOCIETY.

THE seventy-sixth annual meeting of this Society began at Albany on Tuesday, under the Presidency of Dr. Abraham Jacobi, of New York City. In another column we give a detailed account of the interesting proceedings, including full abstracts of the scientific papers and the discussions they elicited,

received by telegraph from our special reporter. We have also the pleasure of laying before our readers, in full, the valuable practical papers read at the meeting by Drs. Austin Flint and D. B. St. John Roosa.

We regret to be called upon to record the adoption of the proposed Code of Ethics, which permits consultations with irregular, but licensed, practitioners;—action which severs the affiliation of the Society with the American Medical Association, and which will prove, we fear, far-reaching in its pernicious influence.

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Seventy-sixth Annual Meeting, held in Albany, February 7, 8, and 9, 1882.

(*By Telegraph, from our Special Reporter.*)

TUESDAY, FEBRUARY 7.—MORNING SESSION.

The Society met in the Geological and Agricultural Hall, and was called to order at 10 o'clock, by the President, Dr. ABRAHAM JACOBI, of New York, and the session was formally opened by religious exercises, by the Right Reverend Bishop DOANE, who read a portion of the Scriptures and offered a prayer.

The PRESIDENT then delivered his

INAUGURAL ADDRESS.

Dr. JACOBI referred to the status of medical science at the time when the Society was organized, seventy-five years ago, when Bichat first thought of establishing on a sound basis a pathology of the tissues—the period of schools and systems in medicine—in contrast with the present, when cellular pathology reigns supreme, and scientific methods prevail in medical science. In the various stages of progress, this Society has participated, and occupied an honorable position. The elevation of American medicine is due largely to the attainments of the general profession. There is no country in the world but ours, in which the professor and the practitioner are so near kin; the professor, almost always a practitioner, having been selected from the ranks of the profession. After speaking of the parts played by each, he stated that it has not always been on the part of the colleges what the profession understands by progress. In regard to the colleges, it may be stated that their requirements for graduation are certainly not always equally strict. We need not inquire into the reason for the inequality of level, be they pecuniary, intellectual, or other. But the fact is recognized, and nobody is more sorry for it than the profession. In the interest of the public, medical education ought to be of the most advanced kind; health and life claim the protection of the community. That these into whose hands the most important and sacred interests of the people are given, should owe their commission to a corporation of professors, with whose very instalment the community has nothing to do, appears preposterous. Thus the profession has for many years insisted upon a change in the law which licenses practitioners of medicine, and this is growing stronger day by day. Perhaps it cannot be said that the medical schools ever opposed the establishment of a State Board of Examination, which alone would be authorized to convey the license to practise, the right of the colleges to confer diplomas, notwithstanding. If it ever did, it is not probable that any college would now oppose any such movement, which I hope will be set on foot, and result in the Legislature passing a proper law. For the good colleges would not be afraid of their graduates not passing the State Board, and no college would be willing to thwart the movement for fear lest its unwillingness to compete might be recognized as, or alleged to be, the result of incompetency.

The question of affiliation with practitioners legally qualified, but not usually classed as regulars, was taken up and a favorable verdict given. It is asserted by many that the time was coming for abolishing the boundaries between the different classes of medical men. "I do not speak of schools of medical men, for modern medicine is not divided into schools. Moreover, as I have said, the homœopaths claim that they do not differ from us, do not mean to differ from us, as formerly they did, and proudly claimed to do. If we have reason to believe not only that medical science is one and indivisible, and based on logic and experimentation, but that we, the profession of the State of New York, are sufficiently imbued with that spirit of logic and experimental science, we may overlook differences, and meet with a spirit of reconciliation those who do not encounter us any more with the dicta of a school—a sect—but who claim that each individual man amongst them stands on his feet and does his own thinking. A crowd of men, favoring the profession with a battle-cry of '*similia similibus*' and 'no quarter,' exclude themselves, and cannot expect kind treatment at our hands. When the ranks, however, are dissolved, and no *corps d'esprit* raises the flag of hostility, and instead of a fighting army under orders, men come into your camp for reconciliation and a parley, the case is different. Besides, in the effort to better the condition of the profession and the public, it is better that no part of the legally qualified practitioners should be excluded from the benefit of such efforts, or from co-operating in that direction."

The question of preventible disease was taken up at some length and discussed, with especial reference to the necessity of providing hospitals for proper treatment of children suffering with contagious disorders, especially scarlatina and diphtheria, in all large cities. Such isolation and intelligent care is needed, not only for the poor, but also for the rich, in order to prevent the spread of these diseases. A letter written by the Secretary of the Society for the Prevention of Cruelty to Children, addressed to the Mayor of New York, illustrating the great need existing in that city, was quoted, and Dr. Jacobi announced that pecuniary aid had been promised for the establishment of such an institution in New York City.

In conclusion, attention was directed to the want of legislation to protect factory children in New York State, and it is recommended that (1) Children employed in factories should be under official supervision. In large cities the Boards of Health could be entrusted with this task. (2) Before being admitted to factory work a child of legal age ought to undergo a medical examination, and chlorotic, anæmic, scrofulous, crippled, scoliotic, bronchitic, and phthisical children, and those under the normal size for their age should be excluded. (3) No night or Sunday work ought to be permitted. (4) Some branches of work to be forbidden entirely, such as mining, glassworks, rag-sorting, working in mercury, lead, arsenic, etc., and in match factories. (5) The earliest age at which the young ought to be admitted to manufacturing employments ought to be fourteen years. Up to the period of puberty the energies of life and mind needed in the development of the individual should not be wasted recklessly.

Dr. Jacobi concluded his address with personal reminiscences, and a comparison between his position on his arrival in this country, twenty-eight years ago, upon exit from a political prison, and the position he now

occupied, the honors of which had been conferred upon him unsolicited by the Society.

The recommendations contained in the President's address were referred to a special committee to be subsequently appointed.

The President then announced the appointment of the following

COMMITTEES.

Business Committee.—Drs. D. B. St. John Roosa, of New York; W. S. Ely, of Rochester; and C. R. Lee, of Oswego Co.

Committee on Credentials.—Drs. Robert Frazier, of Oneida Co.; F. R. Bentley, of Ontario Co.; and William Taylor, of Madison Co.

A recess of ten minutes for registration was then taken.

After the recess the following gentlemen present were made

MEMBERS BY INVITATION.

Drs. E. C. Seguin, of New York; John B. Stonehouse, Wm. Geoghegan, Theo. P. Bailey, G. B. Tefft, Lewis Balch, all of Albany; Lucius E. Felton, of Potsdam,; Brayton Babcock, of Allegheny Co.; S. O. Vanderpoel, Jr., John F. Lockwood, H. R. Starkweather, S. R. Morrow, Chas. F. Huddleston, Lorenzo Hale, John Thompson, W. J. Nellis, all of Albany; Samuel Peters, of Cohoes; A. B. Huested, Otto Ritzmann, P. J. Keegan, and J. W. Gould, all of Albany.

Following the report of the Business Committee, was a report from the Special Committee appointed at the last meeting, to revise the Code of Ethics. By request of this Committee the Business Committee was directed to set apart a special evening for the discussion of the report, and Tuesday was appointed. The following draft of a Code of Medical Ethics was then presented by the Committee (consisting of Drs. Wm. C. Wey, C. R. Agnew, S. Oakley Vanderpoel, Wm. S. Ely, and Henry G. Piffard).

CODE OF MEDICAL ETHICS.

I. *The Relations of Physicians to the Public.*—It is derogatory to the dignity and interests of the profession for physicians to resort to public advertisements, private cards, or handbills, inviting the attention of individuals affected with particular diseases, publicly offering advice and medicine to the poor without charge, or promising radical cures; or to publish cases or operations in the daily prints, or to suffer such publications to be made; or through the medium of reporters or interviewers, or otherwise, to permit their opinions on medical and surgical questions to appear in the newspapers; to invite laymen to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success, or to perform other similar acts.

It is equally derogatory to professional character, and opposed to the interests of the profession, for a physician to hold a patent for any surgical instrument or medicine, or to prescribe a secret nostrum, whether the invention or discovery or exclusive property of himself or of others.

It is also reprehensible for physicians to give certificates attesting the efficacy of patented medical or surgical appliances, or of patented, copyrighted, or secret medicines, or of proprietary drugs, medicines, wines, mineral waters, health resorts, etc.

II. *Rules Governing Consultations.*—Members of the Medical Society of the State of New York, and of the medical societies in affiliation therewith, may meet in consultation legally qualified practitioners of medicine. Emergencies may occur in which all restrictions should, in the judgment of the practitioner, yield to the demands of humanity.

To promote the interests of the medical profession and of the sick, the following rules should be observed in conducting consultations:

The examination of the patient by the consulting physician should be made in the presence of the attending physician, and during such examination no discussion should take place, nor any remarks as to diagnosis or treatment be made. When the examination is completed, the physicians should retire to a room by themselves, and after a statement by the attending physician, of the history of the case and of his views of its diagnosis and treatment, each of the consulting physicians, beginning with the youngest, should deliver his opinion. If they arrive at an agreement, it will be the duty of the attending physician to announce the result to the patient, or to some responsible member of the family, and to carry out the plan of treatment agreed upon.

If in the consultation there is found to be an essential difference of opinion as to diagnosis or treatment, the case should be presented to the patient, or some responsible member of the family, as plainly and intelligently as possible, to make such choice, or pursue such course as may be thought best.

In cases of acute, dangerous, or obscure illness, the consulting physician should continue his consultation-visits at such intervals as may be deemed necessary by the patient or his friends, by him, or by the attending physician.

The utmost punctuality should be observed in the visits of physicians when they are to hold consultations, but as professional engagements may interfere or delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will of course see the patient and prescribe, but if it be the consulting physician, he should retire, except in an emergency, or when he has been called from a considerable distance, in which latter case he may examine the patient and give his opinion in writing, and under seal, to be delivered to his associate.

III. *The Relations of Physicians to each other.*—All practitioners of medicine, their wives, and their children while under paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired.

Gratuitous attendance cannot, however, be expected from physicians called from a distance, nor need it be deemed obligatory when opposed by both the circumstances and the preferences of the patient.

The affairs of life, the pursuit of health, and the various accidents and contingencies to which a medical man is peculiarly exposed may require him temporarily to withdraw from his duties to his patients, and to request some of his professional brethren to officiate for him. Compliance with this request is an act of courtesy which should always be performed with the utmost consideration for the interests and character of the family physician, and when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But if a member of the profession neglect his business in quest of pleasure and amusement, he cannot be considered as entitled to the advantages of the frequent and long-continued exercise of this fraternal courtesy without awarding to the physician who officiates the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety, and responsibility, it is just that the fees accruing therefrom should be awarded to the physician who officiates.

Diversity of opinion and opposition of interest may, in the medical as in other professions, occasion con-

troversy and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians before appealing to a medical society or the law for settlement.

If medical controversies are brought before the public in newspapers or pamphlets, by contending medical writers, and give rise to, or contain assertions or insinuations injurious to the personal character or professional qualifications of the parties, the effect is to lower in the estimation of the public, not only the parties directly involved, but also the medical profession as a whole. Such publications should, therefore, be brought to the notice of the county socities having jurisdiction, and discipline inflicted, as the case may seem to require.

COMMUNICATIONS FROM COUNTY SOCIETIES.

In the call of reports from County Societies, the New York County Society only, was ready with a report, and offered a communication in regard to medical legislation and medical ethics, which were by request referred to special committees already existing.

THE COMMITTEE ON PRIZE ESSAYS

reported that but one essay had been forwarded, "On Tubercle and Cancer," which was deemed worthy of publication, but did not possess the evidence of original research and high standard of excellence to qualify it for the honor of a prize.

Dr. WILLIAM S. ELY, appointed at the last meeting Censor of the College of Medicine,

SYRACUSE UNIVERSITY,

reported favorably, after examination, as to the qualifications of graduates of that school. The high standard observed was attributed chiefly to its graded course of instruction.

The Business Committee offered a resolution limiting the time of reading papers to twenty minutes, and making all motions to extend the time out of order.

On motion, three meetings were directed to be held daily (9 to 12 M., 3 to 6, and at 8 P.M.)

Scientific papers being called for, Dr. F. R. STURGIS read a paper in connection with the subject of Medical Education (which was made a topic for special discussion at this meeting, by the action of the New York County Society, as presented in their communication to this Society), entitled:

HINTS AND SUGGESTIONS UPON MEDICAL EDUCATION.

After considering the problems as presented at present in this country, Dr. Sturgis recommended the following measures as a step towards their solution:

1. The absolute incorporation of medical schools with some chartered school or university making the governing bodies of both the same.

2. Endow the school liberally for educational purposes and make it independent of the students' fees.

3. Separate the right to practise from the diploma. The latter, then, should be a token of proficiency in study and knowledge, and its possession from some school in good legal and professional standing, should be made obligatory before a candidate can present himself for authority to practise in this State.

The views expressed were earnestly endorsed by Dr. ROOSA, and were further discussed by Dr. PERKINS.

Dr. MOORE, of Rochester, advocated the establishment of an Examining Board under the authority of the State Society, rather than to entrust the interests of the profession to an irresponsible and independent body of persons. The great advance in medical education in this country, from the time of his own graduation and under his own observation in the experience of a single lifetime, was referred to, and a hopeful view taken of medical progress in this country in the future. Referring to the establishment of a Board of Examiners, he said that it would not succeed if hostile to the schools, but having a representative from each of the schools in the Commonwealth, it might establish a system of uniform examination for the medical degree. The standard was stated to be what a young man of average attainments can accomplish in the space of time allotted to him. The expenses of the Board should be borne by the Colleges, and the Board should be kept entirely free from political intrigue and influence. Irregular schools and practitioners ought not to be recognized.

Dr. PIFFARD, of New York, advocated the establishment of a single mixed Board, such as was contemplated by Dr. Sturgis.

Dr. STURGIS, in conclusion, claimed that the establishment of such a Board would place irregulars under some sort of control, and do away with all partisan and sectional feeling, which is now the strongest argument of the quack.

Dr. E. R. SQUIBB, of Brooklyn, read a

NOTE ON CLINICAL THERMOMETERS,

calling attention to the defects of the instruments now in use. Thousands of cheap thermometers are sold annually, which are devoid of the skill and care requisite to make a good instrument. The aim should be to obtain one accurately graded to the range within which it is intended to be used. Besides the ordinary errors due to faults of calibre and length, there is a contraction of the bulb, which, rapid at first, continues more slowly, even for several years. After three years, however, it is insignificant, unless the bulb should be heated. Thermometers should not be graduated immediately after they are made. All thermometers should be seasoned for at least three years before the tubes are graduated. The majority of cheap thermometers give incorrect observations, as do also good instruments which have been graduated too soon. Every clinical thermometer should be accompanied by a Kew certificate, or, in this country, by the certificate of the Observatory of Yale College. The charge is fifty cents for this service, and if a physician has a clinical thermometer with such a certificate of examination after three years' seasoning, he can rely upon having a good instrument for use. Dr. Squibb gave the following requisites for a good instrument:

1. The mercury should not rise too slowly; if it does, the bulb is too thick; if too rapid, the bulb is too thin.

2. If the time required to reach the maximum under the tongue is more than nine minutes, it should be rejected as too slow. It should attain it inside of nine minutes, remaining nearly stationary after five or six minutes. Those attaining the maximum too early are liable to be easily broken.

3. The self-registering thermometer should not have its index shaken down too readily. After the register is joined with the column, the instrument is spoiled. Hick's lens-front thermometer was spoken of favorably. A tube five or six inches in length is preferable to one of four.

For correcting a thermometer Dr. Squibb recommended placing it with a standard thermometer under the tongue, and comparing the maximum readings.

The Business Committee presented

OBITUARY NOTICES

of Drs. Levant B. Coates and John F. Whitbeck, which were referred to the Publication Committee.

By request of several members the Business Committee recommended that the proper section of the By-Laws be suspended in order that the

REPORT OF THE NOMINATING COMMITTEE

should be made at the close of the second day's session instead of deferring it until the third day as before. As

it required unanimous consent, it was lost by Dr. Vanderpoel voting in the negative.

Dr. WILLIAM S. ELY, of Rochester, read a short paper, entitled

NOTE ON BEEF-JUICE.

He advocated its liberal use (4 to 30 ounces per diem). He advised in its preparation the use of the "fruit-press." A pound or two of lean beef is cut in small pieces, and thoroughly heated, but not cooked, over the fire, and then being transferred to the cylinder is expressed, and subsequently strained. It contains the juice of the meat, the albumen being uncoagulated. He used it largely in diphtheria; in one case he gave the juice of nine pounds of meat in twenty-four hours (making twenty-eight ounces of juice). It can be used for rectal alimentation.

Dr. GRAY advocated the addition of some alcohol or claret, in order to preserve the fluid.

The Business Committee announced that the

ANNUAL BANQUET

would be given at the Delavan House, immediately after the delivery of the Annual Address by the President, at the Capitol, on Wednesday evening.

FIRST DAY.—AFTERNOON SESSION.

The Society re-assembled at 3 o'clock.

Dr. S. O. VANDERPOEL read a brief, but interesting and suggestive paper, entitled

THE PRESENT CONDITION OF THE TUBERCULOSIS QUESTION,

which he recapitulated as follows:

1. Pulmonary phthisis is not wholly a blood dyscrasia, resulting in the deposition from the blood of a peculiar element of low vitality, called tubercle; at first, in small gray granules, which aggregate, change their appearance, and become the large cheesy masses so familiar to all. A doctrine elaborated by Laennec, and still maintained by a large proportion of the German school.

2. Nor is it, as taught by Niemeyer, a simple caseous degeneration, but rather is the result of catarrhal inflammation in a scrofulous subject, whether in a bronchial or mediastinal gland, which becomes an infecting focus; as a result, the tubercular element soon appears. This material of low vitality soon undergoes necrotic changes, hastening this process in the general mass. The infecting foci are constantly increased until the lung tissue is largely infiltrated; with the increase in infiltration, there is a corresponding increase in the range of temperature and rapidity of emaciation, the tubercular deposit favors this activity, as we know in cases of pure tubercular phthisis. If, then, by appropriate treatment, hygienic or medicinal, we can exclude it, the chronicity of the case is better assured, and the chances of recovery correspondingly increased. It gives a percentage of hope, where the teachings of half a century have been almost hopeless.

The reading of Dr. Vanderpoel's paper upon tuberculosis led to an interesting discussion upon the pathological characters of consumption.

THE PRESIDENT, being called upon for his views upon the subject, said, in reference to the term scrofula, that the word is generally and legitimately used to express a certain condition, in which we wish to avoid circumlocution. In one individual, an inflammation, following injury of a mucous membrane, goes regularly through certain changes, by proliferation of cells, to the formation of healthy tissue; in another case the proliferation of cells occurs, but instead of forming normal epithelium the cells break down, and, their production continuing, they accumulate without completing the process of repair. A similar process may occur in bone or in a gland; the cells finally undergoing fatty degeneration, "caseation," or softening. When this tendency is discovered, it is common to express the fact by the use of the term scrofula. He believed it entirely unnecessary to refer such a condition to a hypothesis based on the old humoral pathology. In many cases of tuberculosis of the lung, the process is an embolic one. In conclusion, he called attention to the necessary distinction insisted upon by Niemeyer, existing between phthisis and tuberculosis, a distinction which appears to be often ignored in discussions upon the subject at the present time.

POSTURAL TREATMENT OF UTERINE DISEASE.

Dr. W. W. POTTER, of Buffalo, read a communication on the "*Genu-Pectoral Posture in Retro-Displacements of the Uterus and Prolapsus of the Ovaries.*" The conveniences required in knee-chest manipulations are (1) a table on casters; (2) a speculum (Bozeman's preferred); (3) forceps, double curved; (4) cotton pledgets, secured by threads of silk, about the size of a walnut, prepared in advance; (5) pessaries (Albert Smith's) of several sizes, and a few astringent and sedative solutions. The sound is rarely needed in the retro-displacements when treated in this posture. If it be correctly assumed, a right-angled triangle is formed, with the table for its base, the thighs of the patient the perpendicular, and the body the hypothenuse. In some cases the retroverted uterus immediately resumes its normal position; in others, the cotton is packed *in situ* for several days in succession, until more permanent methods of support can be adopted if found necessary.

A biographical sketch of a deceased member, Dr. James P. Boyd, was read by title and referred.

THE NOMINATING COMMITTEE

was selected as follows: from 1st District, Thomas R. Pooley, M.D.; 2d District, J. Foster Jenkins, M.D.; 3d District, Norman L. Snow, M.D.; 4th District, B. F. Sherman, M.D.; 5th District, W. H. Johnson, M.D.; 6th District, C. L. Stiles, M.D.; 7th District, John Gerin, M.D.; 8th District, W. W. Potter, M.D.; Society at large, William C. Wey, M.D.

The following-named visitors were made

MEMBERS BY INVITATION:

Drs. Franklin Townsend, Albany; Ed. H. Squibb, Brooklyn; T. Z. Gibbs, Fort Ann; D. H. Goodwillie, New York.

EXTRAORDINARY BONE DEVELOPMENT.

Dr. E. M. MOORE, of Rochester, exhibited a specimen and reported a "Case of Extraordinary Bone Development," which originally was a dorsal dislocation of the head of the femur, which, after manipulation, was left in the extraordinary position of reversing the head of the femur, so that it pointed anteriorly on the dorsal aspect of the ilium, with the toes pointing outwards; the shortening was over two inches. Anchylosis and immense bony development occuring, subcutaneous division of the femur with a Hey's saw was made by Dr. Moore, and the leg was brought into good position and drawn down, a gap of one and one-half inches being subsequently filled with bone, although a false joint could not be secured. The man was able to walk upon the limb and continue his avocation.

EFFECTUAL DOSAGE OF CERTAIN REMEDIES USED IN THE TREATMENT OF NERVOUS DISEASES,

was the title of a short paper by Dr. E. C. SEGUIN, of New York. He had been led to present this communication from having observed a number of cases, especially of chorea, and cerebral syphilis, or brain tumors, in which practitioners had used the proper remedy, but had failed in the desired result, because they had been

too timid in administering sufficiently large doses. There seems to be a deficiency in medical teaching as to the maximum physiological dose that may be employed in particular cases. He then reviewed posologically a few drugs, giving the doses usually recommended, and the maximum in certain cases of nervous disease, based upon personal experience. He advised beginning with the ordinary doses and pushing them rapidly, in proper cases, to the maximum required by the individual. They are especially considered in reference to their use in nervous diseases. *Nitrate of silver* is commonly employed in doses of one-sixth to one-half grain three times a day, in locomotor ataxia, and various forms of sclerosis especially, and Erb speaks of it very favorably in this class of cases. Dr. Seguin's experience has led him to endorse the views of Erb, and he has used it also in myelitis. He recommends one-quarter to one-half grain to be given thrice daily before meals and continued for several months. He has never seen any cases of argyria resulting.

Duquesnel's Aconitia.—Gublar introduced and highly recommends in trigeminal neuralgia (from $\frac{1}{120}$ to $\frac{1}{124}$ of a grain). His own experience is very favorable (Caswell & Huzard, and Schiefplin & Co., make very reliable tablet and pills of aconitia), he recommends a commencing dose of $\frac{1}{140}$ of a grain, and carefully discovering the amount of susceptibility of the patients. In debilitated and female patients, it is better to begin with $\frac{1}{300}$ or $\frac{1}{250}$ of a grain; after using this for several days without bad effects, the drug may be pushed to $\frac{1}{100}$ of a grain, given three times a day. He had given from four to eight of such doses in cases of ataxia without relieving the pain or causing numbness; he had found it especially valuable in trigeminal neuralgia. *The Fluid-Extract of Conium* (Squibb), has for its usual dose from ♏ij–v.; much larger doses are well borne. [This paper was cut short by the expiration of the time allotted by the Business Committee; it was, on motion, referred to the Publication Committee, the lecturer not being a member of the Society except by invitation.]

Dr. CHASE, of Brooklyn, reported a case of supra-orbital neuralgia, in a lady of eighty years, in which he had given $\frac{1}{75}$ of a grain of aconitia, three times a day (aggregating $\frac{1}{25}$ of a grain in the day). After six or seven days prostration occurred, but no worse result. Dr. Seguin said that he had given as much in aggregate as $\frac{1}{6}$–$\frac{1}{4}$ of a grain in the day; he was not aware of any fatal accident, although some cases of collapse had followed large doses.

Dr. SQUIBB objected to the proprietary flavor of the expression used by the lecturer, of Squibb's conium, as the preparation is simply the fluid-extract of conium prepared according to the U. S. Pharmacopœia of 1860. In connection with the subject of the paper, he remarked that it should be remembered that there is a different susceptibility to drugs and the effects are slightly different in kind in different persons. We must, therefore, be careful in applying general averages to individual cases. The different varieties of aconite furnish different alkaloids, and the Duquesnel's aconite is probably obtained from the aconite of the Himalayas, which is comparatively stronger than our Napellus, and is properly known by the name of the manufacturer.

Dr. SEGUIN, in concluding the debate, mentioned that the doses of conium usually ordered were insufficient; he uses very large doses in proportion, never giving less than gr. xx.–xxxx. to adults; sometimes giving as much as a drachm at a dose, with only good effects in chronic convulsive disorders, especially in chorea of adults. He also uses the conium in doses of gr. xx.–xxx. as an indirect hypnotic, especially in combination with bromide of potassium.

Dr. SQUIBB, by permission, warned against the danger of diluting the conium fluid-extract—of a precipitate being formed, the active principle may be deposited and thus be given in a comparatively large dose at the end. He knew of bad results, but of no fatal accidents from this cause.

Dr. CHARLES S. BULL read an essay on

SYPHILITIC DISEASES OF THE LACHRYMAL APPARATUS.

The specific lesions of these associated organs are rare; when affecting the tear-gland, the parenchyma is invaded, but the sac usually escapes injury. Two cases of syphilitic disease of the caruncle, occurring in the practice of Dr. Post, of New York, were reported, the form of disease being gummy infiltration. Papular and tubercular syphilis may occur on the lids, and extend to the canaliculus, and into the sac. More commonly the disease commences in the nose, and subsequently causes dacryo-cystitis. The orifice of the nasal duct may be obstructed by a mucous patch it its neighborhood, or by a gummy deposit. The obstruction usually begins near the opening of the duct, but subsequently the disease and resulting stricture may involve the entire length of the duct. Epiphora, and dacryo-cystitis, and abscess, with subsequent fistula, may result, but not very commonly, from syphilis. The tendency of syphilitic lesions of the lachrymal apparatus is destructive, unless properly and promptly treated. Necrosis and sequestration of the bony portion of the lachrymo-nasal canal is a secondary process likely to occur; also periostitis followed by exostosis, and, perhaps, caries and obliteration of the nasal duct. Especially is this process likely to commence in the ascending apophysis of the superior maxillary bone. Medical treatment of these cases, in preference to surgical interference, is considered to be of advantage to the patient. Surgeons should not hastily slit up the canaliculus in cases of syphilitic disease of the eye.

Dr. LUCIUS E. FELTON, of Potsdam, presented a model of a

NEW GALVANIC BATTERY.

In this battery the carbons are cylindrical, and about three inches in length. In order to prevent the corrosion of connections the end of the carbon is covered with copper, and a metal plug is then driven into a hole bored for the purpose. The carbon is next dipped in melted paraffine, the exposed portion is then coated with marine glue, which perfectly protects the connection. The zincs are united in sections, so that those not in use need not be immersed in the fluid. The cells are absolutely water-tight, so that no fluid escapes if the battery is turned over. The electro-motor force is a little over two Volts. for each cell. It is a simple bichromate and acid battery with zinc and carbon elements. The one exhibited contained eighteen cells.

The apparatus was commended by those who examined it, and considered an improvement over the ordinary form of constant current batteries.

FIRST DAY.—EVENING SESSION.

The meeting was called to order at 8 o'clock, and the consideration of the report of the Committee on the

CODE OF ETHICS,

which was made the special order for this evening, was discussed. Inasmuch as the proposed new Code of Ethics contemplated such an innovation as permitting consultation with irregular practitioners, it naturally called forth general expression of opinion, which, to a great extent, was adverse to it.

Dr. ROOSA, of New York, as a substitute to the report of the special committee, offered the following:

"The Medical Society of the State of New York, in view of the apparent sentiment of the profession connected with it, hereby adopts the following declaration, to take the place of the formal Code of Ethics, which has,

up to this time, been the standard of the profession in this State.

"With no idea of lowering, in any manner, the standard of right and honor in the relations of the physicians to the public and to each other, but, on the contrary, in the belief that a larger amount of discretion and liberty in individual action, and the abolition of detailed and specific rules, will elevate the ethics of the profession, the medical profession of the State of New York, as here represented, hereby resolve and declare,

"That the only ethical offences for which they claim the province to exercise the right to discipline, are those comprehended under the commission of acts unworthy a physician and a gentleman.

"*Resolved, also*, That we enjoin the County Societies, and other organizations in affiliation with us, that they strictly enforce the requirements of this code."

The substitute received thirty-nine yeas and thirty-seven nays. The President ruled, however, that it was an amendment to the By-laws, and required a two-thirds vote, and, therefore, he declared it lost.

The report of the Committee (see page 161) was finally adopted by a two-thirds vote, after the entire evening had been devoted to its discussion.

WEDNESDAY, SECOND DAY.—MORNING SESSION.

Meeting was opened by prayer at 10 o'clock—Dr. WILLIAM GOVAN, Vice-President, in the chair.

The following gentlemen were made

MEMBERS BY INVITATION:

Drs. S. G. Delamater, of Duanesburg; J. P. Creveling, of Auburn; J. F. Fox, of Cohoes, and J. Ennis, of Schenectady.

THE COMMITTEE ON BY-LAWS

reported having made an examination of the proposed alterations in the By-laws of Rockland, Greene, Fulton, and New York Counties, and finding them in accordance with the laws of the State of New York, and of the By-laws of this Society, recommend their approval. The report was adopted.

The Committee also reported that only six County societies were operating under by-laws in accordance with the laws of the Society, and urged other societies to present their by-laws to the State Society for revision according to law.

Dr. PERKINS, of Schenectady, offered a resolution directing a committee to be appointed to make arrangements for the

CORRECTION OF CLINICAL THERMOMETERS

by the Dudley Observatory, at Albany, on the plan pursued by the Winchester Observatory, of Yale.

This motion was opposed by Dr. Squibb, and he urged that Yale Observatory had been well equipped, at considerable expense, and was now able to examine all the clinical thermometers in the country, and at a very reasonable charge. The motion was accordingly lost.

The following

AMENDMENT TO THE CONSTITUTION

was proposed by Dr. Roosa, of New York, and laid over, under the rule, for one year:

"Offences against the ethics of this Society are only to be comprised under the head of acts unworthy of a physician and a gentleman."

REPORT OF THE TREASURER.

The Treasurer, Dr. CHARLES H. PORTER, of Albany, made his annual report, showing a balance in the treasury of $453. The accounts were audited and approved.

THE COMMITTEE ON HYGIENE,

Dr. E. V. STODDARD, of Rochester, Chairman, made a verbal report of progress, and asked permission to present the formal report to the Secretary for publication in the proceedings.

THE COMMITTEE ON EXPERIMENTAL MEDICINE

reported, through its Chairman, Dr. JOHN G. CURTIS, of New York, that a bill presented by Mr. Bergh to the State Legislature, preventing vivisection, had failed to pass, chiefly owing to the efforts of this committee.

The report concluded with the following resolutions, which were adopted:

Resolved, By the Medical Society of the State of New York—

I. That it is the unanimous opinion of the members of this Society, that the unrestricted performance by qualified medical men of scientific experiments upon animals, is essential to the maintenance and progress of the science and art of medicine.

II. That while the Society would thus set forth to the Senators and Assemblymen, in Legislature assembled, the views of the medical profession of the State upon this subject, it would also call their attention to the fact that at the late International Medical Congress in London, a formal resolution, denouncing interference with experimentation upon animals, was adopted by more than three thousand official representatives of the medical profession of the world.

III. That in the event of the introduction of any so-called "anti-vivisection bill" into the Legislature of 1882, it shall be the duty of the Committee on Experimental Medicine to forward a certified copy of these resolutions, as a memorial from this Society, to the Governor of the State of New York, and to each house of the Legislature thereof.

On motion of Dr. AGNEW, of New York, it was directed that the foregoing resolutions be printed and distributed among the members of the Legislature.

THE COMMITTEE ON LEGISLATION

reported, through its Chairman, Dr. Albert Vanderveer, of Albany, in regard to the communication from the County Society of New York, containing drafts of amendments to two laws regulating the practise of medicine in this State. The first amendment provides that

"The Regents of the University of the State of New York shall appoint one or more boards of examiners in medicine, each board to consist of not less than seven members, who shall have been licensed to practise physic and surgery in this State; and all persons desiring to practise physic or surgery, after the passage of this act, must submit to the examination hereinafter provided, and obtain the diploma hereinafter provided, before entering upon the practise of physic or surgery in this State."

The second amendment is intended to remedy the defects discovered in the Act of 1880, "to regulate the licensing of physicians and surgeons."

On motion, the above recommendations were directed to be printed and distributed among the members, and made the special order of business for Thursday.

Dr. DANIEL LEWIS, of New York, read a paper on

THE TREATMENT OF SCARLATINA,

in which, following the recommendation of Prof. Bartholow, in his Cartwright lecture on the antagonism of drugs to disease, he had adopted the treatment of scarlitina by digitalis in full doses. He commended the use of the infusion of the fresh leaves, given in drachm-doses three or four times a day, to children (from three years up). The only other treatment was by local application of glycerin diluted, with tincture of chloride of iron and chlorate of potassium, during convalescence. The results of one hundred and fifty cases were given in this communication, out of which only seventeen died. There were only two cases of otitis in the entire number, and

both were mild ones. No cases occurred of suppuration of the cervical glands.

Dr. LARENZO HALE, of Albany, presented an essay on

AN IMPROVED DRESSING FOR FRACTURED CLAVICLE,

in which he recommended a modification of Moore's dressing; the principal feature of this new method consisted of an adjustable back-sling made of a suspender-brace, being tightened during the day, and allowed to be more lax during the night.

Dr. VANDERVEER spoke in approval of this dressing from personal experience.

Dr. H. KNAPP, of New York, read a paper

ON CROUP OF THE CONJUNCTIVA, WITH REMARKS ON CONTAGIOUS FORMS OF CONJUNCTIVAL INFLAMMATION.

From observation of two unusual cases occurring in children, he announced that he had been obliged to change a previously-held opinion, and was led to recognize an important difference between the morbid anatomy of croupous and diphtheritic inflammation, and important differences between the course of the two diseases when affecting the structures of the organs of vision. He concluded with some remarks upon the value of the methodical application of cold to communicable conjunctival disorders, especially by light ice compresses, continued until the tumefaction of the lids and the thickness of the discharge is reduced. This treatment is capable of saving all cases of ophthalmia neonatorum, and nearly all cases of conjunctival diphtheria.

Dr. C. R. AGNEW, of New York, read a paper upon

COMMUNICABLE EYE DISEASE, AND SOME OF ITS RELATIONS TO BLINDNESS AND PAUPERISM,

and urged greater attention to the hygiene of children's homes, especially as regards cleanliness in lavatories, breathing space in sleeping apartments, and abundance of milk in the diet.

The two preceding papers were discussed together, the members generally speaking in slighting terms of the use of antiseptics *per se*, and insisting upon the importance of systematic cleanliness, cold applications, and good general hygiene. The use of water slightly impregnated with neutral salts, such as sodium chloride, and saturated solution of boracic acid, were generally recommended in preference to more active treatment on the one hand, or simple water dressings upon the other. In using cold, the prevalent "slop-water application" was condemned, as keeping the patient wet and uncomfortable; and because he had seen secondary inflammation of the auditory meatus caused in several cases by the water washing the secretions down into the ear. The plan preferred was by placing a block of ice at the bedside, the cloths being laid upon it, and frequently renewed; another plan was to fill a small rubber bag with snow, or pounded ice, and keep it applied as before.

INTERNAL ŒSOPHAGOTOMY.

Dr. JOHN O. ROE, of Rochester, read the history of a case of a lady who suffered with difficulty in swallowing for several months without assignable cause. Dr. Roe diagnosticated stricture of the œsophagus, although no permanent organic narrowing existed. Internal œsophagotomy, after the plan of Morell Mackenzie, of London, was proposed and practised, followed by rapid and complete recovery.

SECOND DAY.—AFTERNOON SESSION.

In the discussion upon Dr. Roe's paper two unpublished cases of internal œsophagotomy, with successful results, were mentioned by Dr. ELSBERG. He warned the Society that the operation should not be done except in great emergency, and even then only with the greatest care to prevent serious injury.

Dr. POST, of New York, desired to correct the possible impression which might be received from the paper, that a person suffering with œsophageal stricture must necessarily starve to death, and that the operation is the only alternative. Rectal alimentation will keep the patient alive for an indefinite period.

Dr. LOUIS ELSBERG read a paper on

THE MUSCLES OF THE LARYNX AND THE LARYNGOSCOPIC IMAGES PRODUCED BY THEIR PARALYSIS.

If, in affections of either the brain or the pneumogastric or the recurrent laryngeal nerve, all the laryngeal muscles on either or on both sides are paralyzed, the corresponding vocal bands, of course, assume a position uninfluenced by muscular action, *i. e.*, like the cadaveric position. When they are fixed in this position, either on one side or on both, during attempts at phonation, as well as during respiration, the appearance is very characteristic, and easily recognized by means of the laryngoscope, so that the diagnosis is clear and conclusive. In such a case there is no real difficulty of breathing, but a good deal of *leakage of air*, as I call it, and therefore a waste of breath. The voice is weak, or else reduced to an almost inaudible whisper. The patient cannot cough, expectorate, or speak properly, because in these acts it is necessary to close the *rima glottidis*; and this he cannot do. Speaking, of course, requires a greater effort, the muscles of expiration (especially the abdominal) are unusually strained; therefore, discomfort is felt, and quickly, fatigue. On forced inspiration, a stridulous sound is often produced, which comes from the air passing through the upper aperture of the larynx and the flaccid vocal bands.

But when the paralysis, whether bi-lateral or unilateral, *is* or *becomes incomplete*, a very curious, and as yet unexplained, fact has been observed, which is of very great importance for general medical practitioners, as well as for specialists, to know; it is the fact that the abductor filaments (those that separate the vocal bands) are more prone to be affected than the adductor filaments (those that shut up the breathing space), and that if in a disease in which both the abductors and the adductors are affected, *recovery* takes place, the adductors are apt to recover first, or exclusively; so that in such a case a patient *during the progress of recovery* is in danger of a dyspnœa, which may necessitate tracheotomy to prevent death.

Paralysis of the narrowers of the rima glottidis causes, during attempted phonation, more or less leakage of air, and gives its characteristic image during that act; while paralysis of the wideners of the rima glottidis causes more or less dyspnœa, and must be examined for its characteristic image during inspiration and expiration. The first causes phonatory leakage, the second respiratory insufficiency.

Dr. WILLIAM HAILES, Jr., of Albany, presented a communication upon *Improved Methods in Laboratory Teaching and Demonstrations in Histology*.

Dr. AUSTIN FLINT read a paper upon

THE PHYSICAL DIAGNOSIS, BY MEANS OF PERCUSSION AND EXPLORATION BY PUNCTURE, OF PERITONITIS WITH AND WITHOUT PERFORATION OF THE ALIMENTARY CANAL, AND THE EMPLOYMENT OF ASPIRATION IN CASES OF PERFORATING PERITONITIS. (See p. 149.)

TREATMENT OF DOUBLE TALIPES EQUINO-VARUS.

Dr. A. M. PHELPS, of Chateaugay, reported eight cases treated by free incision and extension. Experience had confirmed his previously expressed opinion of the value of this method. The cases fit for this operation are not common, perhaps only one out of

five or six are proper subjects. He recommends primary division of the tendo-Achillis, then, of the posterior tibial tendon, and if this will not bring the foot into good position, open incision of the plantar structures will give a successful result.

THE TREATMENT OF HAIR-MARKS BY ELECTROLYSIS

was advocated by Dr. GEO. H. FOX, of New York, it having been suggested by the successful application of the method for the removal of superfluous hairs. The treatment of superficial nævi by this means was contrasted with scarification, as recommended by Balmanno Squire, of London, and preference given to the electrolysis. The objections are tediousness of operation and severe pain; it is not applicable, on this account, to young children. Some slight scarring must be expected.

Dr. SHERWELL, of Brooklyn, preferred multiple puncture, with needles dipped in caustics, to the electrolysis.

Dr. H. KNAPP, of New York, had obtained good results from extirpation, either by dissection or caustic, and he finds that subsequently the remainder will obliterate. If possible, we should discern the starting-point of the telangiectasis and remove it.

Dr. SHERMAN, of Ogdensburg, reported a case cured by the procedure recommended by Dr. Knapp.

Dr. A. VANDERVEER reported an attempted

SUBCUTANEOUS SECTION OF THE NECK OF THE FEMUR,

in a case of ankylosis of the hip, and explained the method of performing the operation. The lady had suffered with prolonged hip-disease, and being given up as hopeless by her physicians, the limb was allowed to assume a very awkward position, in which ankylosis finally occurred. A subcutaneous operation was attempted, but the saw breaking in the wound, it was found necessary to enlarge the incision and remove the saw with the forceps, virtually making an open wound. After section of the neck of the femur and extension, it was found that tenotomy of the adductors was needed. The limb was now placed in a good position. An abscess occurred at the site of the wound, but the patient finally recovered, and a false joint was obtained. The limb is now straight and useful, with good motion at the hip.

THE DIVISION OF OPTIC AND CILIARY NERVES FOR SYMPATHETIC OPHTHALMIA

was advocated, by Dr. H. D. NOYES, of New York. Two forms of sympathetic ophthalmia are observed: (1) the irritative, (2) the inflammatory. The former sometimes merges into the latter, but the inflammatory form may arise without being preceded by inflammation. Sympathetic ophthalmia of the irritative form, and the milder cases of the inflammatory form, are generally checked by enucleation of the offending eye; in some other cases of inflammation this, for some unexplained reason, is not sufficient. The modification of the original operation of cutting the nerve is performed by going between the internal rectus and the superior or the inferior, into the depth of the orbit, dividing the optic nerve, and everting the globe, in order to completely divide all the nerve-fibres. Some operators divide one or both of the lateral recti-muscles. Simple neurotomy sometimes is followed by reunion of the nerves, the sensibility of the cornea returning in about twelve months; neurectomy, removing a small piece of the optic nerve, is, therefore, to be preferred to simple division of the nerve, with a view to the ultimate success of the operation.

Optico-ciliary neurectomy is to be preferred as a prophylactic in cases where the affected eye is (1) extremely tender on pressure, and (2) subject to repeated attacks of inflammation. Under these circumstances, it will affect the other eye sooner or later. It may also be performed in other cases where enucleation should be performed, but where consent to extirpation of an offending eye cannot be obtained.

In cases of absolute and painful glaucoma this operation has the advantage of reducing the tension of the globe and retaining its normal appearance and size.

Dr. KNAPP approved of all that had been said in regard to the importance of preventing sympathetic ophthalmia, but could not endorse his remark that optico-ciliary neurotomy is in general favor among specialists. He had performed it himself nine times, in one of which gangrene of the globe occurred. Von Gräfe had written a monograph upon the subject and pointed out many cases in which this operation is entirely inadmissible. At the Ophthalmological Section of the International Medical Congress the subject was freely discussed and many bad results and some fatal cases reported. In many cases the operation only serves to delay enucleation until it is too late to be of service.

Dr. ROOSA opposed the operation, and would never perform it.

Dr. L. D. HALLOWELL, of Buffalo, advocated division of the ciliary nerves in proper cases as a preliminary measure, though not intended to be applicable to foreign bodies in the eye.

MEMOIR OF THE LATE DR. JAMES P. WHITE,

of Buffalo, by Dr. AUSTIN FLINT, was presented and referred to the Committee of Publication.

Dr. L. D. BULKLEY, of New York, read a paper entitled,

THE MALIGNITY OF SYPHILIS,

with an analysis of 450 cases, protesting against the views recently enunciated that syphilis may be regarded as a benign disease. Dwelling upon the prevalence of the disease and its varied manifestations, he concluded that it is, in point of frequency, only second to phthisis. It is closely related to scrofula and similar degenerative disorders.

His consideration of the subject was summed up as follows:

1. Syphilis is a constitutional infectious disease of which the first outward manifestation is the chancre, initial lesion, or initial sclerosis at the site of entrance of the virus.

2. While this primary lesion commonly presents points by which it may be recognized, in other instances it is very difficult to speak with positiveness from the local lesion alone, and, therefore, cases presenting only local signs must, as a rule, be excluded from any consideration of syphilis as regards the pathological tendencies of the disease.

3. In a certain proportion of cases constitutional syphilis is a mild affection, even as other infectious diseases occur, with varying severity under different conditions.

4. The causes of the differences observed in certain cases of syphilis are as yet unknown. Individual constitution, surrounding circumstances, the discharge of the virus received, proper treatment, and possibly partial protection through hereditary influence of the disease, are elements of importance in every case.

5. No definite prognosis can be made from the character of the initial lesion of syphilis, as to the progress of the disease if left untreated. Cases which at the beginning seemed insignificant, have in later years proved most serious, while, in many instances of late lesions of syphilis, no satisfactory history at all can be obtained in regard to the initial sore, it having been so slight, or so concealed, as to have escaped notice.

6. In view of the very severe and extensive manner in which syphilis may at some time during its course affect any or all of the tissues of the body, and the destructive pathological tendencies of the disease under-

favoring conditions, syphilis cannot properly be spoken of as a benign disease, although certain cases may, under suitable circumstances, run a very mild course.

SECOND DAY.—EVENING SESSION.

Dr. ABRAHAM JACOBI, President of the Society, delivered the

ANNIVERSARY ADDRESS,

taking for his subject "Infant Feeding, and Infant Foods," after which the Society sat down to its Annual Dinner at the Delavan House.

THURSDAY, FEB. 9.—THIRD DAY—FINAL SESSION.

After prayer, the Society proceeded to the consideration of

MISCELLANEOUS BUSINESS.

Communications were received from County Societies.

The resolution from the Otsego County Society, to relieve certain permanent members from paying dues, on recommendation of County Societies, was referred to the Committee on By-Laws.

The special Committee on the President's Address (Drs. E. M. Moore, S. O. Vanderpoel, Wm. C. Wey, and J. P. Gray) offered resolutions favoring erection of special hospitals for contagious diseases of children. Also, that the conferring of the title of Doctor of Medicine should be by medical colleges only, after the examination and recommendation of an independent Board of Examiners, which Board shall be common to all the colleges.

The Publication Committee was authorized to publish the Transactions at their discretion.

The Committee to act in conjunction with the Society to Prevent Cruelty to Children was continued, and Dr. C. R. Agnew was added in place of the late Dr. Jas. P. White.

Dr. AUSTIN FLINT offered the following resolution:

Whereas, Efforts have recently been made in this country to excite in the minds of ignorant people a prejudice against vaccination,

Resolved, That this matter be referred to the Committee on Experimental Medicine, and that this Committee be empowered to take such measures as may seem to its members requisite for the protection of the public health.

Adopted, and Dr. Flint was added to the Committee.

Dr. JOHN P. GRAY, of Utica, moved, that in view of the important relations of the medical profession to the administration of justice, the time has arrived when the faculty should declare its opinion upon the proper functions and limits of medical-expert testimony, therefore,

Resolved, That the true function of the medical expert is to expound and interpret the results of the pathological conditions, and that in the absence of disease he is not justified in drawing conclusions as to civil responsibility from moral manifestations of conduct, that department belonging exclusively to law.

Unanimously adopted.

By resolution, Dr. Gray was requested to prepare a paper on this subject for the next meeting.

The following papers were read by title:

On Inflammation of the Shoulder-joint, Resulting from Hemiplegia, by Dr. L. E. FELTON, of St. Lawrence County.

Report of a Case of Molluscum Fibrosum, by GEORGE G. HOPKINS, M.D., of Brooklyn.

The Early Diagnosis of Pott's Disease, by V. P. GIBNEY, M.D., of New York.

The Significance of Pain Referred to the Ear, by Dr. D. B. ST. JOHN ROOSA, of New York (see page 152).

Cases of Glaucoma, in which Iridectomy on one Eye seemed to Precipitate an Attack of Acute Glaucoma in the Fellow Eye, by Dr. D. WEBSTER, of New York.

A Few Original Thoughts on Cholera, by H. RAYMOND ROGERS, M.D., of Dunkirk.

And *Facial Paralysis occurring in Connection with Aural Disease*, by S. SEXTON, M.D., of New York.

Dr. D. H. GOODWILLIE, of New York, read a paper on *Application by Insufflation of Medicated Powders to the Upper Air-Passages, for the Relief of Catarrhal Conditions*, which was referred to the Publication Committee.

Dr. E. H. M. SELL, of New York, read a paper

ON THE USE OF AVENA SATIVA,

in which he recommended the use of concentrated tincture of avena sativa or maltine, as a nerve stimulant and general tonic in the neuroses. The concentrated tincture is invaluable as an antidote to the opium habit, and he reported several striking cases which were cured by it.

Dr. SQUIBB offered a resolution that writers of papers for the future sessions of the Society, either limit their papers to twenty minutes, or prepare an abstract for reading, and that any motion to extend the prescribed time shall not be in order. Adopted.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK offered a communication pointing out defects in the medical law of 1880, and asking that appropriate amendments, or a new bill be recommended to the Legislature, so as to define clearly what is meant by a practitioner of medicine, and second, to prescribe a penalty for perjury in registration; as the present law is inoperative against magnetic physicians. These points were embraced in resolutions, which were adopted.

Drafts of bills from the Committee on Legislation were approved and recommitted.

THE REPORT OF THE COMMITTEE ON NOMINATIONS, as follows, was presented and adopted:

President.—Harvey Jewett, M.D., of Canandaigua.

Vice-President.—E. D. Ferguson, M.D., of Troy.

Secretary.—Wm. Manlius Smith, M.D., of Syracuse.

Treasurer.—Charles H. Porter, M.D., of Albany.

Chairman of Committee of Arrangements.—S. B. Ward, M.D., of Albany.

Honorary Members.—Drs. Roberts Bartholow, of Philadelphia; Sidney Ringer, of London; Charles M. Ewing, of New York.

Eligible for Honorary Membership.—Drs. Theodore G. Wormley and William Goodell, of Philadelphia.

After a short farewell address by the President and the usual vote of thanks, the Society adjourned to meet at Albany, on the first Tuesday in February, 1883.

CORRESPONDENCE.

MEMPHIS—ITS SEWERS AND ITS HEALTH.

To the Editor of the MEDICAL NEWS:

A statement has been going the rounds of the newspapers, that the mortality of Memphis has increased since the introduction of the Waring System of Sewerage. This statement would seem to imply that the sewers have, to say the least, been a factor in the increased death-rate.

It may be said that a problem is being worked out here, in which our community especially, and sanitarians generally, are deeply concerned, and as this question is one of public interest, I propose to state, briefly, the facts as far as I am acquainted with them.

This system of sewerage was inaugurated by the laying of pipe, January 20, 1880. House connections were begun March 1, 1880. On July 1, of the same year, twenty miles of sewer had been laid. The system was practically completed, July 1, 1881, when thirty-four miles of sewer-pipe had been laid, and 3579 water-closets had been connected with it.

It will appear from these data, that during the year 1880, the sewers were in operation to a limited extent, and only during the latter part of the year; while they were in full operation during most of the year 1881.

It is proposed to compare the mortality for 1881 with that of 1880. No allusion is made to 1879 and 1878, because they were epidemic years.

The total mortality for 1880 was 1054; for 1881 it was 1276. This increase of mortality was distributed quite evenly through the year. During the last quarter of 1881 the mortality was a little less than for 1880, being 272 against 279 for the same quarter of the year previous.

The increased mortality for 1881 was observed in both the white and the colored races, except for the last quarter of 1881, when the death-rate among the whites was less, and among the blacks was greater than for the corresponding quarter of 1880.

The deaths from zymotic diseases generally were 274 for 1880, and 320 for 1881.

The mortality from all the forms of malarial fevers, including typho-malarial, was nearly the same for each year, being 101 for 1880, and 99 for 1881.

The number of deaths from typhoid fever was 17 for each year. Dysentery destroyed 70 lives in 1881; only 45 in 1880. Diphtheria, 43 in 1881; only 12 in 1880. Consumption carried off 168 in 1881, and 157 in 1880. Acute diseases of the respiratory organs destroyed 102 in 1880, and 124 in 1881.

It is generally conceded that the operation of the sewers has been eminently satisfactory. There is no ground for the complaint of sewer-gas in dwellings, and the pipes are believed to be comparatively free from it.

To July 1, 1881, it had been found necessary to cleanse a portion of the mains, of deposits, only twice; and the laterals not at all. To the same date, only twenty-one cases of obstruction by sticks, rags, etc., had occurred in the six-inch pipes, and these had been removed at an average cost of $15 each.

The only defect in the works yet discovered, has arisen from an error of calculation. It is, that the two fifteen-inch mains, running parallel to the bayou, are too small to carry off readily the sewage from the laterals. As a temporary means of relief to these mains, there have been established at five points overflows into the bayou.

I cannot see how the system of sewers can in any way be held responsible for the increased mortality of 1881. By this system we have been relieved of the great evil of soil-pollution; but it would seem that something else than sewers is necessary to make the health of this city what it should be. What this is remains to be discovered.

It must be remembered that one feature of the Waring system is soil-drainage. This it accomplishes but to a very limited extent, because here the network of pipes encloses no areas less than three hundred feet square, and in many portions of the city, much larger areas are dependent upon these pipes for drainage. Furthermore, the drain-pipes, which lie alongside the sewer-pipes, are, in very many places, twelve feet and more below the surface; and, as the soil contains much clay and is very retentive of moisture, these drains exert no influence in the way of drying the surface soil.

My belief is, though I have been able to obtain no mathematical data, that the general level of the subsoil water has not been materially lowered by the sewer system here; and, in the light of past observations upon this point, in other localities, *we may not reasonably look for much reduction in our death-rate until our drainage is radically improved.*

The water-supply of this city is objectionable upon two grounds:

1. It requires filtering to make it suitable for cooking, washing, or drinking, and this is impracticable for the largest portion of the population.

2. The source from which the water is obtained is open to contamination, through the influence of back-water at certain times, from the drainage of slaughter-houses, stockyards, and sewers.

The investigations of Major Benyard (United States Engineer Corps), made for several months past, and still being carried on, show that when the Mississippi is high, and Wolf River low, a current sets in below the mouth of the present outlet of the city sewers, and carries the water from this locality, as well as that which is polluted by the outflow from Bloody Bayou and Bayou Gayoso, above the point at which the city supply is taken.

The influence of such water as this upon the public health, must, of necessity, be prejudicial. The water company who have recently come into possession of the works, seem determined to remove all objectionable features, and I have no doubt will ultimately give the city good water.

Memphis has an honest and intelligent government, and an energetic and faithful Health Board, who are doing everything in their power to make the city what it ought to be, from a sanitary as well as a commercial standpoint. But Rome was not built in a day!

To Dr. G. B. Thornton, President of the Board of Health, I am indebted for free access to all the records of his office, and for much information pertaining to this subject.

Yours, respectfully,
R. B. MAURY, M.D.

MEMPHIS, TENN., January 24, 1882.

NEWS ITEMS.

ALBANY.

(*From our Special Correspondent.*)

MEETING OF NEW YORK STATE MEDICAL SOCIETY.—In spite of the snow blockade that has interrupted travel to some extent throughout the State, the annual meeting of the Medical Society of the State of New York was held at Albany, convening on Tuesday, the 7th inst., according to appointment, and a large and unusually active meeting was held. New York City was well represented by the President of the Society, Dr. Abraham Jacobi, and by Drs. Vanderpoel, Agnew, Elsberg, Bulkley, Piffard, Roosa, Squibb, Seguin, Gibney, Bull, Sturgis, Rockwell, and others, while from the State perhaps a larger number were present than at any previous meeting. Drs. Moore and Ely, of Rochester; Potter and Roe, of Elmira; W. Manlius Smith, Felton, and many other prominent members of the profession in the State were also noticed to take an active part in the proceedings.

The interest of the session, apart from the scientific work, centred especially around two proposed measures, involving the general and political interests of the practitioner. The first was a new code of ethics; the second, new legislation regulating the right to practise. The first had been referred to a committee at the last meeting, whose report was now presented, and by direction of the Business Committee and the vote of the Society it was made the special order for discussion upon Tuesday evening. The question was one which deeply interested the members, inasmuch as it warranted consultations with irregulars. While the New York City delegation were almost entirely in favor of such a radical change, the State members were opposed to it. A motion offered by Dr. Roosa, of New York, as a substitute for the report, nearly succeeded in passing, although in effect it entirely threw overboard all codes of ethics, and left the subject to each individual prac-

titioner to decide for himself. It was only prevented from being adopted by the decision of the President, that being in effect an amendment to the By-laws, it required a two-thirds vote. There were thirty-nine votes in favor of it, and thirty-seven against it.

This motion is especially noticeable, as it received the endorsement of a majority of the members voting. It is also significant as showing the attitude of the profession in New York to the Code of Ethics of the American Medical Association.

The report of the Committee on Ethics, which was finally adopted, not only amends the Constitution of the Society, but clearly dissolves the connection of the New York State Medical Society with the American Medical Association. The attention of the members was called to this fact, but by a two-thirds vote the measure was carried; a step which will probably again cause discussion when the delegates from the Society present their credentials next June, at St. Paul, at the meeting of the National Association.

The proposed legislation called for by the communication from the New York County Medical Society, contemplated not only compulsory registration, but also the divorcing of the diploma and the license to practise, confining the right to grant the latter to a State Examining Board. It was intended to pass this at this meeting, in order to allow it to receive the endorsement of the Society at once, and to push it through at the present session of the Legislature. The act is expected to become a law within twenty days after its passage. The principles of this bill are set forth substantially in a communication from Dr. Sturgis, whose conclusions are given in another column. Whether due solely to the knowledge that these important measures were coming up for discussion or not, the fact remains that the present is one of the largest and most successful gatherings of the profession of this State that has ever been held.

The papers read were numerous, and, necessarily, brief; quite a number of them were abruptly cut off by the twenty-minute rule adopted on the first day, on recommendation of the Business Committee. The programmes for each session were only to be obtained at the commencement of the exercises, two programmes being issued daily. This method is decidedly inferior to the old plan of providing a complete programme on the first day, which gave the members in advance an idea of the time when papers interesting to them would be presented. The plan adopted is almost equivalent to neglecting to provide any programme at all.

The address of Dr. Jacobi, at the Capitol, on the evening of the second day, was on the subject of the various infant foods now offered by dealers, and the defects and inefficiency of most of them were pointedly considered and condemned.

The report of the Nominating Committee gives general satisfaction.

WASHINGTON.

(*From our Special Correspondent.*)

SMALL-POX IN THE DISTRICT OF COLUMBIA.—While small-pox has been so rife over nearly the whole country during the past winter, this District has been singularly favored. Only one death occurred from the disease during the year 1881, and that was in December. Since that time six cases have been developed, all from the first case, so that Washington is to be credited, up to this date, with only seven cases in all.

Nevertheless, vaccination and revaccination have been vigorously practised, both by the health authorities, by the physicians to the poor, and by private physicians. One of the regulations of the public schools is, that all children must produce certificates of vaccination before they can be admitted.

The National Board of Health have recently issued a circular letter to the heads of Government departments, recommending "that prompt measures be taken for securing, as far as may be practicable, the vaccination or revaccination of all the employés of the Government," and the Secretaries of the Treasury and Interior, and the Postmaster-General have already called the attention of their employés to the necessity of complying with this recommendation.

It is quite a relief to the people of the District of Columbia to feel that they have something to boast of in exemption from small-pox, after the serious misrepresentations that have gone abroad on the subject of "Washington malaria."

SMALL-POX.—The mortality returns for the week ending February 4, give the following number of deaths from small-pox: New York, 20; Philadelphia, 12; Boston, 1; Allegheny, 17; Erie, 1; Montclair, N. J., 1; Richmond, 12; Norfolk, 1; Dayton, 10; East Liverpool, O., 1; Indianapolis, 1; Louisville, 1; Chattanooga, 1; Milwaukee, 4.

For the week ending January 28, there were 9 deaths in Hudson County, N. J., 1 in San Francisco, 4 in New Orleans, and 1 in Holyoke, Mass.

On the 6th inst. there were 14 new cases and 6 deaths, and on the 7th, 6 cases and 2 deaths, from the disease in Chicago; and during last week 18 new cases in Richmond.

HEALTH IN MICHIGAN.—For the week ending January 28, 1882, the reports indicate that bronchitis and influenza have increased, and that tonsilitis, membranous croup, typho-malarial fever, remittent fever, and diphtheria have considerable decreased, in area of prevalence.

Cases of small-pox are reported as follows: in Crystal Lake township, Benzie Co., January 7; in Prairie Ronde, Kalamazoo Co., January 24; in Port Huron township, January 24; in Watson township, Allegan Co. (1 case), January 26; in Pontiac township (4 cases derived from a tramp), January 28; at the villages of Menominee (2 cases), Waucodah (3 cases), and Spalding (3 cases), in Menominee Co., January 28; at Bay City (convalescents), January 28; at Escanaba, Delta Co., January 28; at Detroit, January 28; at Grand Rapids (convalescents), January 31; and in Park township (brought from Leesburg), St. Joseph Co., February 2, 1882.

LEPROSY IN MINNEAPOLIS.—We are informed that a leper, aged twenty-six, died at Minneapolis, on February 1. The disease first manifested itself upon his arrival in this country, six years ago, and during this time he has endured great suffering.

VACCINATION OF EMPLOYÉS, ETC.—The Louisville and Nashville and Short Line Railroad Companies have followed the example of the Pennsylvania Company, in requiring a certificate of vaccination from its employés. The contagion of this exemplary act we hope may outrun the small-pox.

In a letter to the Postmaster-General, the President of the National Board of Health strongly recommends the vaccination or revaccination of all persons employed in the Government departments.

An ordinance has been published by the City Councils of Richmond, Va., compelling the vaccination of all persons who have not been vaccinated within twelve months, except in cases where any regularly licensed physician shall declare it to be injurious or

unnecessary. Any person refusing to be vaccinated, or to allow his or her child, children, or wards to be vaccinated within fifteen days after the passage of this ordinance, is liable to a fine of five dollars.

OBLIGATORY VACCINATION IN SWITZERLAND.—During the passage of a new law on epidemics, the Swiss National Council (*Gaz. Hebd.*, January 1), adopted by ninety votes against twenty-three the principle of obligatory vaccination. Every infant born in Switzerland must, according to this law, be vaccinated during the first year of its life, or at latest during its second year; and infants born out of Switzerland, if not previously vaccinated, must submit to the same rule. No child can be permitted to frequent a public or private school without a certificate of vaccination.—*Med. Times and Gaz.*, Jan. 14, 1882.

DISINFECTION OF CLINICAL THERMOMETERS.—In a letter to the *Lancet*, January 14, 1882, Dr. HASSALL draws attention to the importance of thoroughly disinfecting clinical thermometers after use, by washing them in a solution of permanganate of potash or carbolic acid, so as to avoid any danger of transferring contagious diseases from one patient to another.

ADULTERATION OF FOOD AND DRUGS BILL.—A bill has just been presented in Congress to prevent the adulteration of food and drugs. According to its provisions an article is adulterated:

a. In the case of drugs:

First. If, when sold under or by a name recognized in the United States Pharmacopœia, it differs from the standard of strength, quality, or purity laid down therein.

Second. If, when sold under or by a name not recognized in the United States Pharmacopœia, but which is found in some other pharmacopœia, or other standard work on materia medica, it differs materially from the standard of strength, quality, or purity laid down in such work.

Third. If its strength or purity fall below the professed standard under which it is sold.

b. In the case of food or drink:

First. If any substance or substances has or have been mixed with it so as to reduce or lower or injuriously affect its quality or strength.

Second. If any inferior or cheaper substance or substances have been substituted wholly or in part for the article.

Third. If any valuable constituent of the article has been wholly or in part abstracted.

Fourth. If it be an imitation of, or be sold under the name of another article.

Fifth. If it consist wholly or in part of a diseased, or decomposed, or putrid, or rotten animal or vegetable substance, whether manufactured or not, or, in the case of milk, if it is the produce of a diseased animal.

Sixth. If it be colored or coated, or polished or powdered, whereby damage is concealed, or it is made to appear better than it really is, or of greater value.

Seventh. If it contain any added poisonous ingredient, or any ingredient which may render such article injurious to the health of a person consuming it: *Provided*, That the National Board of Health may, with the approval of the Secretary of the Treasury, from time to time declare certain articles or preparations to be exempt from the provisions of this act; *and provided further*, That the provisions of this act shall not apply to mixtures or compounds recognized as ordinary articles of food, provided that the same are not injurious to health, and that the articles are distinctly labelled as a mixture, stating the components of the mixture.

Section 5 further provides, "That, in order to carry into effect the provisions of this act, the Secretary of the Treasury is hereby authorized to appoint, from names submitted to him for that purpose by the National Board of Health, one or more suitably qualified persons as special inspectors, and as public analysts for adulterated food and drugs at such ports of entry as the Secretary of the Treasury may deem expedient; and it shall be the duty of the National Board of Health to prepare instructions governing the work of such inspectors and analysts, which, when approved by the Secretary of the Treasury, shall govern their action, and that of collectors of customs, in preventing importation from foreign countries of food or drugs adulterated within the meaning of this act."

THE RED CROSS SOCIETY.—The International Committee of the Red Cross Society of Geneva has decided to offer for public competition three prizes of 2000 francs each, with second prizes to the amount of 500 francs. The subjects of the three essays are: 1. On Improvising the means of Treatment of Wounded and Sick. 2. On Improvising the means of Transport. 3. On Improvising an Ambulance or Field Hospital. The object sought is to obtain by the union of the three a complete work on the art of improvising the means of assistance for wounded and sick. The committee is desirous of grouping methodically all available information as to the measures by which the three important branches of treatment, transport, and ambulance may be best extemporized in cases where special provision has not been made beforehand for them. Details are given of the various matters grouped under these three headings in the circular issued by the committee, to which we must refer those interested in the subject. The essays may be in French, German, or English. They must reach the President of the International Committee, Rue de l'Athénée, 8, Geneva, Switzerland, before April 1, 1883; each essay must bear a motto, and be accompanied by a sealed note containing the name of the author. The committee reserve the right of withholding any of the prizes, should the essays appear to the jury appointed to examine them not to possess sufficient merit. The jury will be composed of members of different nationalities. If prizes are awarded, the essays are to be the property of the Society, under the condition of being published by it within a year from the date of the award of the jury.—*Lancet*, Dec. 31, 1881.

HOW TO AID INJURED PERSONS.—Gen. McClellan has accepted the chairmanship of the committee recently formed in New York, whose purpose is to teach persons of all classes how to give first aid to the sick and injured, pending the arrival of a physician or surgeon, and to give instruction in nursing and in the laws of health. A large number of physicians have already volunteered their services in giving the needed instruction, and eighteen classes have been formed. Similar work has been in successful operation in London for nearly five years, under the auspices of the Society of St. John, of Jerusalem. The importance of this, the newest phase of New York's philanthropy, in supplying such instruction to the police, firemen, railway employés, workmen in factories, and, in fact, to all classes, must be generally appreciated and approved by the public and medical profession. We trust to hear soon of other cities following New York's example.

REMOVAL OF THE ENTIRE UTERUS.—On January 3, Sir WILLIAM MACCORMAC removed the entire uterus, on account of epithelial cancer of the cervix, in a woman, aged thirty-four, who had been admitted into St. Thomas's Hospital, under Dr. Ord's care, with serious intestinal obstruction. An incision was first made

through the abdominal parietes from the umbilicus to the pubes. It was then found that the cavity of the pelvis was completely filled by a tense, thick-walled cyst, which flattened the rectum against the sacrum, and was the cause of previous severe obstruction. The uterus and its appendages were at first completely concealed by the tumor; and until it was evacuated, no room could be obtained to perform the necessary manipulations. The cyst, which afterwards proved to be ovarian, contained very offensive pus, and it was impossible to prevent partial escape of its contents into the peritoneal cavity. On the cyst being partially emptied, it was separated from the almost universal adhesions it had contracted, and removed along with the uterus. On the completion of the operation, the large double-barrelled T-shaped drainage-tube recommended by Bardenheuer was inserted, and the two ends projecting from the vagina were utilized for frequent irrigation. No attempt was made to suture the pelvic outlet. The abdominal wound was closed in the usual manner. On the fifth day, there was evidence of some suppuration opposite the lower part of the wound, which was therefore reopened. Some pus escaped, and the cavity was washed out. The temperature, which had risen to 102.6°, fell soon afterwards; and the patient is now (ten days after the operation) making rapid progress towards recovery. Eucalyptol was the antiseptic agent employed for irrigating, as well as for the spray and external antiseptic dressings.—*British Med. Journ.*, Jan. 14, 1882.

PURITY OF ICE.—The New York papers have lately been agitating the question of conveyance of disease by ice. The *World* recently interviewed Dr. S. O. Vanderpoel, formerly Health Officer of New York, who, in reply to the inquiries propounded by its reporter, said: "I have no doubt that disease can be disseminated just as well by ice as by water. If I am not mistaken, some time ago certain ice formed from pond water near Boston was suspected to have caused sickness, and when the ice was examined it was found to contain numbers of impurities. I do not believe that freezing forces out foreign substances, and the assertion that disease-germs are expelled cannot be sustained, because these germs cannot be isolated so as to be examined microscopically. I think a distinction should be drawn between miasma and malaria. The first properly belongs to animal germs, and the other to vegetable. Now these animal germs are effectually destroyed by oxidization when exposed to the air, and is the reason why in rivers or in large lakes where no sewage enters the water the ice from it may be used with impunity."

THE JOURNAL OF NERVOUS AND MENTAL DISEASES.—Messrs. G. P. Putnam's Sons writes to us, requesting us to state that the report that this journal has been "sold out" or discontinued, which has obtained currency in some periodicals, is without foundation.

SHALL WOMEN PRACTISE MEDICINE?—Mrs. Mary Putnam Jacobi, in an article in the *North American Review*, ably discusses this subject, and declares that "the profession of medicine must be chosen deliberately, and not at hap-hazard, from a strong and genuine taste, and not from the mere pressure of economic necessity; it must be seriously prepared for in youth; must be entered upon at the age at which at present many women marry; may not yield its best returns until full maturity has been reached; must be adopted, therefore, if at all, for a lifetime. Hence is required either an accidental celibacy or a deliberate renunciation of marriage for the sake of medicine, such as is not dreamed of in regard to any other work; or else such an adjustment of domestic claims as shall render them and the practice of medicine by married women mutually compatible."

A SPANISH HOSPITAL IN PARIS.—The *Siglo Medico*, of Madrid, states that steps will shortly be taken to open a hospital in Paris, for the relief of necessitous Spaniards. The Spanish colony in that city already exceeds thirty thousand, many of whom are in indigent circumstances, and dependent entirely, in case of sickness, on public benevolence. The new hospital will owe its inception mainly to Duke Fernan-Nuñez, the Spanish ambassador, and will be modelled, as far as possible, on the plan of the French Hospital at Madrid.—*British Med. Journ.*, Jan. 14, 1882.

A GENEROUS GIFT.—Dr. G. S. B. Hempstead, a member of the Scioto County (O.) Medical Society, has donated his large library to the Society.

PERSONAL.—The London *Graphic*, of January 21, contains an excellent likeness of the late Dr. John W. Draper, New York.

BEQUEST TO DARTMOUTH MEDICAL COLLEGE.—Mr. Edwin W. Stoughton by his will, which was admitted to probate on the 1st inst., gives $2000 to Dartmouth Medical College, for its Pathological Museum.

DIED.—On January 8, 1882, JOHN FLINT SOUTH, F.R.C.S., in the eighty-fifth year of his age. Mr. South is best known as the translator of Chelius' *System of Surgery*, to which he added numerous valuable original notes.

It was largely through the energy of Mr. South, that the remains of John Hunter were interred in Westminster Abbey, the epitaph being from his pen.

NOTES AND QUERIES.

A COMMON MISTAKE OF DRUGGISTS.

A CORRESPONDENT writes us that again and again he has sent patients to drug-stores to obtain "India-rubber tissue," or "pure thin sheet rubber," for covering poultices and such like uses; and nearly always he finds them sending "gutta-percha tissue" or India-rubber cloth. "The former tears easily, curls up and becomes useless at the temperature of a properly made poultice, and is unsuitable for medical purposes; the latter being made partly of cloth, absorbs discharges and quickly becomes foul. Apparently our friends of the pill and the pestle do not know what 'India-rubber tissue,' or 'bandage rubber,' as we believe it is technically known to the trade, really is."

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 31, TO FEBRUARY 6, 1882.

SUMMERS, J. E., *Lieutenant-Colonel and Surgeon.*—Medical Director Department of the Platte. Leave of absence further extended one month.—*S. O. 20, C. S., A. G. O.*

WOODWARD, JOSEPH J., *Major and Surgeon.*—Granted leave of absence for six months on Surgeon's certificate of disability, with permission to go beyond sea.—*S. O. 23, A. G. O., January 30, 1882.*

WOODHULL, A. A., *Major and Surgeon.*—The leave of absence granted him in S. O. 227, A. G. O., 1881, is extended one month and ten days.—*S. O. 27, A. G. O., February 3, 1882.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

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ORIGINAL LECTURES.

INFANT FEEDING AND INFANT FOODS.

THE ANNIVERSARY ADDRESS,

Delivered before the New York State Medical Society, February 8, 1882.

BY ABRAHAM JACOBI, M.D.,
PRESIDENT OF THE SOCIETY.

MR. VICE-PRESIDENT, LADIES AND GENTLEMEN, MEMBERS AND DELEGATES OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK: I hold in my hand a report of the Committee appointed to co-operate with the New York Society for the Prevention of Cruelty to Children, "in all things pertaining to the physical and moral safety of infants and children." The report I refer to was read in last year's meeting, and has been widely distributed by the above-named Society. One of the measures contemplated and advised in it was, that there should be a place or places in large cities, where the infants and young children of the poor might be supplied, at cost, with the simple though sufficient articles of food. These simple and sufficient articles of food were milk, barley, oat-meal, and, for those no longer infants proper, eggs. Their value as infant food for those who were without breast-milk, was taken for granted, and considered almost in the light of an axiom. To make it so has been one of the duties of my life. Truth, however, is frequently suspected because of its very simplicity, and often do we see complicated and roundabout means and measures resorted to in preference to plain and direct ones. Now, what I have to say may, in part, appear very common-place and trifling, because of its application to common-place things and interests. But questions are involved which it has taken, and will still take, much time and labor to solve. To render the results hitherto obtained available, the normal feeding of the infants possible, and to protect them from the injuries inflicted by ill-directed love, ignorance, and the evil-devised plans and frauds of what is called commerce and industry, will be the object of the brief remarks which I shall have the honor to make before you in regard to the dangers to which our infants are constantly exposed.

Mortality amongst infants is very great. In Europe, out of one hundred born alive, eighteen die before they reach the end of their first year. Out of one hundred who die at all ages and of all diseases, in New York City, twenty-eight are less than a year old. The causes of these deaths vary; it is a characteristic fact, however, that of all those taking place in infants under a year, from 40 to 53 per cent. are the results of diseases of the organs of digestion.

Thus the attention of the physician called to see a sick child is mostly claimed by the alimentary canal. His care and that of the mother or attendant is therefore due to preventive measures mostly. The best preventive measure, and sometimes it proves curative, is the breast-milk of mother or wetnurse. That is an axiom, an undisputable law of nature, as long as the circumstances of the case are favorable. In view of the great mortality in the first two months, breast-milk is the one and indispensible food for those under two months. A mother who refuses to nurse *at least that time* for other than reasons of health or life, is an accomplice in causing, perhaps even the only cause of, the death of her offspring. It is true that a baby may be taken sick with intestinal disease in spite of being nursed at the breast, for there are *many* causes of disease; it may, however, occur that babies are taken sick *because* of being at the breast. And it is those cases that both mothers and physicians ought to be well acquainted with. Sometimes it is not the breast-milk which is at fault, in the beginning, but the faulty use it is put to. Many babies suffer intensely because they are not limited to intervals of from 2 to 4 or 5 hours, as required by either age or constitution. In their cases, by too frequent feeding, both the milk of the mother and the digestion of the infant, are impaired. Here regularity is the sole indication. Sometimes, though fortunately in few cases only, there appears to exist an idiosyncrasy not explained, on the part of the baby who cannot thrive on the milk of the mother, and may do so after a change of food. In many cases, however, there are demonstrable dangers in the very breast-milk of either mother or nurse; there may by an undue percentage of fat, or of cheese, or of salts, or of sugar, or even accidental admixtures. These may occur in the secreting organ (thus blood may be found in the milk) or be traceable to the circulating blood of the whole system; of the latter they may be the very constituents, or foreign bodies floating in it. They can be classed as either morbid dispositions or as actual admixtures. Women suffering from constitutional syphilis, chronic consumption, or anæmia, extensive rachitis, severe nervous derangement, hysterical or other, those suffering from care and hard work, and those who are compelled to take a great deal of medicine, will serve their babies best by not nursing them at all.

In regard to the influence of the medicines, the opinions *have* been divided. It was claimed that milk being a secretion of the gland, and not a transudation from the blood, would not contain foreign material to any great extent. That is true so far as an absolutely healthy woman and normal milk are concerned. But the first period of lactation yields colostrum, not normal milk, and very often the latter is changing into a colostral condition, such as it was soon after birth, containing different-shaped fat globules, more sugar, soluble albumen, in fact, real blood serum. This may take place in every case of impaired health. And the more serum of blood is contained in any milk, the easier is the admixture of soluble substances circulating in the blood. Such substances are ethereal oils, coloring matter, iron, iodide of potassium, arsenic, zinc, mercury, salines, bismuth, lead, antimony, nitrate of potassa, magnesia, all of which have been frequently found in the milk, and frequently missed. They will be missed the more frequently the healthier the woman and its mammary secretion. But, as I formulated the subject some years ago, milk secreted from an insufficient mamma, by a woman not in full health and vigor, by an old woman, by a very young woman, by an anæmic woman, by a convalescent woman, who has consumed a large portion of her albumen, be it circulating or tissue albumen, by a neurotic woman with frequent disturbances of the circulation—milk, in fact, which is not the normal transformation of the elements of the mammary glands, but consists of more or less transuded serum, is apt to be impregnated with elements circulating in the blood. The indications on one hand for the permission to nurse, on the other, for the administration of medicines to a nursing woman, require, therefore, a

greater strictness than is usually conceded. At all events, the good results obtained in many cases of ailment on the part of the infant, *by artificial feeding, in preference to nursing*, are better than accidental.

Those infants who are thus deprived of breast-milk, or never had it, or have an insufficient supply of it, require artificial feeding. The material resorted to ought to be as much like mother's milk as possible; and naturally, when human milk cannot be had, animal milks are selected. Amongst them only two are available to any extent, that of the goat and of the cow. If there be any objection to either, it is principally valid in regard to the former. For the chemical incongruities and other difficulties, to which I shall briefly allude in regard to cow's milk, are even more pronounced in the case of goat's milk.

My remarks of this evening I expect to be of a practical nature throughout, and brief. Thus I shall not try to go into chemical or physiological questions beyond the time allotted or the opportunity afforded. Therefore, I shall allude to but two points which it is interesting to appreciate, in order to understand why it is that cow's milk, as a sufficient substitute for mother's milk, must necessarily be a failure.

Human milk and cow's milk differ mainly in that the percentages, and probably also the properties, of fat and of caseine contained in them, differ widely. The percentage of fat in cow's milk is larger than in human milk, and, on close observation, we shall learn that woman's milk contains as much fat as the young digestive organ can tolerate. From what we know of the diastatic power of the infant pancreatic gland, we must conclude that its property of digesting fat is but slimly developed soon after birth; and daily observation proves that such is the case. When you examine chemically the normal alvine digestions of the infant, well mixed, uniform, and yellow, you will discover not only fat acids, but free fat to the extent of about 12 per cent. Some more fat leaves the intestines in a saponified condition. Many of the passages which have been believed to contain caseine in excess, because of their white color, were found to contain large quantities of fat. And all this happens when the normal infant is fed exclusively on normal breast-milk. Now if much fat is not required nor absorbed under normal circumstances, if fat acids form so easily when the digestion is apparently normal, with the constant tendency of deranging digestion; if we know, as we do, that even normal breast-milk contains more fat than the infant has any use for, we must admit that in artificial feeding, with cow's milk or other material, we are in greater danger from giving too much fat than too little. Good milk has been called that which contains most fat, say from four to five per cent. The more cow's milk deserves the title of being good—that is, fat—the greater is the danger arising from giving it to infants without considerable modification. This result authors appear to gradually appreciate. When Forster fed a baby of four months with cow's milk and rice decoction in the proportion of 1 to 4, all the albuminous substances and sugar of this mixture had disappeared when the fæces came to be examined. Thus they were entirely digested, but of the ashes 34, and of the fat 30 to 40 per cent. were found unchanged. This experiment proves, in the opinion of Prof. Bollinger, whom I rejoice in quoting, that a milk less rich in fat is more adapted to serve as infant food than one with a large percentage of fat; and further, that cows whose milk is destined to be used as infant food, ought to be fed so as to reduce rather than increase the amount of fat contained in it. A good authority, Prof. Feser, makes the distinct statement that the milk he examined on the Alps of Switzerland, and which he prefers greatly as children's food, contained less fat than that from the cows in the neighborhood of a large city. If that be so, and it is so, I recommend as a matter of practice that the morning milk, with its lesser percentage of fat (butter), should be given, in preference to evening milk, if any at all.

Now, if the excess of fat be one of the causes why cow's milk should not be employed as infant food, why not remove it or diminish its percentage? Easily said, not easily done; for when milk is allowed to stand, and the cream to rise, the milk at the same time changes its reaction. Instead of being alkaline or neutral, it becomes acid, and acid milk is a danger which an infant must be protected from. Some years ago, Lefeldt and Delaval invented each an apparatus which, by rapid centrifugal motion, separates the cream from the milk very thoroughly. Such an apparatus may, perhaps, be found useful in reducing the normal fat of cow's milk to an acceptable standard in the future. For the present, however, I know of no proceeding which accomplishes the end in view; and, while submitting to the unavoidable, I must protest against the avoidable occurrence which is reported to have taken place in a court of justice but lately. In one of the skim-milk police cases—and unfortunately there are less "cases" than adulterations—the expert for the defence, a well-known chemist, tried to clear his client by proving him a public benefactor, inasmuch as Dr. Jacobi objected to an excess of butter in the milk used for children.

Caseine is represented in cow's milk in a larger percentage than in human milk. To reduce its relative quantity, compared with the rest of the solid constituents, is possible by the increase of these only. There is no method by which its absolute quantity in a given amount of milk could be diminished, except such as would render the remaining part of the milk unfit for use. This diminution, moreover, would have to be a very thorough one, for a mixture containing more than 1 per cent. of caseine has been found to be indigestible by Hammarsten, and by Biedert. But these are not the only objections to cow's-milk caseine. Not only is its percentage in the milk too great; its chemical and physical properties *differ greatly* from that contained in human milk. Mineral, acetic, and tartaric acids, epsom salts, phosphate of lime, form a dense and hard coagulation with the caseine of cow's milk, while human milk coagulates in loose and small flakes only, under the same circumstances. Cow's milk, when introduced into the infant stomach, forms hard curds; if the organ be strong, or the infant liable to vomit easily, as most of them are, thick massive pieces of cheese are thrown up, and relief will follow. If no vomiting occur, these hard masses are propelled into the intestinal tract, where sometimes they give rise to obstruction. Sometimes, however, they irritate the canal to such an extent, that *diarrhœa* is the result. In both cases lumpy cheese is the main constituent of the evacuations. In every case of infant diarrhœa, the examination of the passages ought to be made; in many cases the appearances will be found as described, and no case of the kind will terminate favorably unless the food be changed. To say that these cases will occur, would not do justice to the facts. They are very frequent, I have seen hundreds; but lately a child of sixteen months of age, and of six pounds in weight, was presented to me with the same symptoms, and with the additional remark, not only that everything had been done by the medical adviser to stop the exhausting diarrhœa, but also that a cow had been purchased for the sole purpose of furnishing pure milk for the suffering baby. That suffering baby was instantly improved when the pure milk was stopped, and more suitable food was substituted.

The objections to cow's milk, as the exclusive diet of infants, in place of mother's milk, which cannot be had, are dependent on its very chemical composition and physical properties. These cannot be changed by

the most studious and successful attempts at procuring the most uniform and pure article possible. That, however, does not prove that a bad or indifferent milk is as good and useful as the very best milk from the very best cows. The inference is rather this, That the employment of inferior milk is criminal when good milk can be had through precaution, care, and industry. To have accomplished that purpose is the pride of several European cities. In some it was through medical societies that the idea was started and put into effect, to procure as good milk as cows of good stock, well fed under favorable sanitary conditions, could furnish. Stuttgart had the first establishment of the kind; that in Frankfort-on-the-Main commenced its operations in 1877, with thirty cows, and increased that number to eighty-one in 1881. The amount of milk produced, and delivered to consumers, in 1881, was 313,563 litres (quarts), more than ten quarts per cow daily. The establishment is private property, but to earn the support of the public, and to secure the desired co-operation of the physicians of the town, the proprietor bound himself not to engage in any other business, and solicited the control and advice of a committee, consisting of three delegates of the medical society, one veterinary surgeon, and one chemist. Great pains are taken in the purchase of animals of a good stock, all of them thus far being imported from Switzerland. Before they are admitted, they are examined by the veterinary surgeon, who superintends the institution, and keeps a regular record of those who may fall sick. Two months before calving the milk is not sold at all. The age of the cows of from three to eight years is considered the only available one. The stables are well ventilated, and washed, drained, and connected with the system of city sewers. The floors of the stalls, the ceilings, and the lower part of the walls are cemented. The skin of the animals is looked after with great care. The stables are so near the city limits, that the milk cannot suffer by transportation. It is tightly corked in half-quart and quart glass bottles (this process being cautiously watched), and speedily delivered. Printed directions for its further treatment accompany the article. Besides, stress is laid on avoiding a prejudice on the part of the public, to which I have raised objection long ago with but very partial success, viz., not to select the milk of a special cow for the special use of the same individual, but to mix and equally distribute the milk of the whole dairy.

A great innovation for practical purposes, based on good experiments and long experience, is that no change of food takes place, and poisonous, purgative, or otherwise injurious admixtures to the food of the animals are avoided. Dry food only is given, viz., 15 kilog. (30 pounds) of hay, 6½ kilog. (13 pounds) of meal and bran, 6 grammes (1½ drachms) of salt, and spring-water to drink.[1]

Human knowledge and foresight have almost exhausted themselves in these praiseworthy efforts. But the result of them all is *good cow's milk, and no equivalent for mother's milk.* But do I mean to say that cow's milk, given pure, or cow's milk mixed with water, is absolutely injurious, poisonous, to babies? Far from it. The undeniable fact that there are infants who thrive on that exclusive diet, or whose general condition of health remains such that no medical or medicinal interference in their behalf appears called for, would give the lie to such an exaggerated opinion. Still, there are a great many infants *who appear* to thrive better than *they actually do.* Many grow fat and rotund on improper food, no immediate harm makes its appearance, and still you see many such as increase in weight, even more than the average infant, and still lay the gradual foundation to future ailing. For such fatness and rotundity means, too frequently, rachitis, and requires watching and change of food. Still, the number of infants remaining in good condition on that food is not very small. What does it prove? Nothing else but that the digestive processes permit of a certain latitude, that nature does not do routine work, and that the sum total of vital processes do not respond to certain occurrences, or influences, like reagents in a chemical test, where the same process always yields the same results. There is *no food on which certain infants will not thrive.* But when, in a large percentage of cases, the same unfortunate results are exhibited, and when these can be traced to their exact and uniform cause, that particular food is to be condemned. The assertion of many that cow's milk is an exact substitute for human milk, is the counterpart of that which claimed equality for animal and human blood. The practice, based upon this assumption, resulting, as it did, in the transfusion of animal blood into the human circulation, outlived itself very speedily.

Cow's milk, as a universal substitute for mother's milk, has lost its credit with many through the differences in the article; which, however, as long as no adulterations are perpetrated, are less marked than the same secretion of the human being. If that were not so, how does it happen that all over the civilized world substitutes are sought for, offered, and purchased, though milk be as cheap and handy as anything else? Why is it that to avoid cow's milk, untold risks are run in procuring more expensive, more unknown, and more unreliable vegetable compositions, which seldom keep the promises loudly displayed on the labels? What are these promises? What does it mean when they claim to take the place of mother's milk?

Mother's milk is considered the best prepared article of food known, though, as you have been told before, it may be—it could have been improved upon. Perhaps *it is* the best, though; at least there was a time when we all were of that opinion; for perhaps the surplus of fat, which passes off undigested, may serve some purpose hitherto unknown. An ideal article of food must serve two purposes and consist of two classes of constituents. It must, in the infant, supply the growing tissue with material sufficient to take the place of that which is constantly wasted, and to allow a surplus for increase; and, secondly, supply fuel for the purpose of keeping up the production of an equable temperature and the functions of the organs, mainly those of respiration. The first requirement is fulfilled by the proteinous, or albuminous, substances, the other by carbo-hydrates. This statement would require modifications, if it were the object to be absolutely correct, for the two classes will supply each other, act vicariously for each other, even change into each other, under certain circumstances, in the complex machinery of the human system. The albuminous tissue-builder in the milk is mainly caseine, sometimes, also, albumen; the second class is principally represented by fat and sugar. In vegetables the first class is represented in the gluten, the second mainly in the starch. If you add, that in the milk, the ideal food, the proportion of the first class to the second is about 1 to 4, the vegetable substitutes are to be judged, in regard to their mere chemical composition, to that formula of about 1 to 4.

But it is not the chemical formula alone which determines the rank of a substance as a nutriment. To the equivalents of the chemical formula of cow caseine infant mathematics would not object, did not the infant stomach revolt against it. Thus it is not exclusively the chemistry of an article, but its digestibility, which comes into question. Now, not everything is equally digestible for everybody, sick or well, old or young,

[1] Dr. V. Cnyrim, in "Frankfort-on-the-Main, Its Hygienic Conditions and Institutions." Ed. by Dr. A. Spiess, 1881.

adult or child, child or infant, infant or newly born. And particularly is that so with regard to starch, which forms such an overwhelming part in the composition of vegetables, and particularly of those which are mainly used for the purpose of the manufacture of infants' foods.

Starch is changed into sugar and rendered digestible by the secretion of two sets of glands, the salivary glands and the pancreas. The latter does not possess that function before the end of the first month of life. The former begins to perform the same function, to a certain degree, immediately after birth. The experiment has been made by Schiffer, Korowin, and many others. Starch, enclosed in a small bag, is introduced into the mouth of the infant. After a certain time the starch is found to be transformed into sugar. To collect fifteen grains of saliva in a baby of two or three weeks took from fifteen to thirty minutes; in a baby of two months, but one or two minutes. Thus two facts result from these experimental observations: 1. That starch is digestible at any age; 2. That the transformable and digestible amount of starch is but very small in the first weeks of an infant, and increases gradually. About the eleventh month the digestive property of the saliva is equal to that of an adult, when the quantities are equal.

The inferences to be drawn are: 1. That farinaceous foods may contain starch, but *starch must not be the main part* of the food; 2. That when they contain a great deal of starch it is best to change it, by a thorough baking process, into dextrine, which is changeable into sugar, and is easily absorbed and utilized; 3. That those farinacea ought to be selected for infant food in which the proportion of gluten to starch favors the former.

There is another consideration of vast importance, which, when the infant foods now in the markets were first manufactured, could not be known. Starch is not the same article everywhere. In different substances it requires different times to be transformed into sugar. Potato starch requires 2 to 4 hours, that of peas 1¾ to 2 hours, wheat ½ to 1 hour, barley 10 to 15 minutes, oats 5 to 7 minutes, rye 3 to 6 minutes, maize 2 to 3 minutes.

Guided by these facts, I invite you to scan with me a number of farinaceous substitutes—their claims, promises, and powers. You will notice, there is not one of the men or companies who supply them but is loud in the praise of his gift to infancy; not one but ranks in his actual or alleged estimation as the arch-benefactor of mankind.

Justus von Liebig's (the great chemist) substitute consisted of the flour of wheat and barley malt, bicarbonate of potassium, water, and milk in certain proportions. For about twenty years this preparation has been the subject of eulogies and reproaches, until in its original form it has been nearly given up; for its home preparation is not so easy as its inventor claimed.

It requires too much care and attention from a person of intellectual undersize. Besides, everything containing sugar is liable to decompose in summer by fermentation and moulding; all preparations *really dry* have a bad taste. Moreover, the phosphate of lime, which, it is true, is found in sufficient quantity in both wheat and malt, does not get into the solution, and finally, *for its preparation*, you always require *milk*, milk in winter and summer, milk in city and country, with all its actual or alleged dangers. Still more, it has, though prepared ever so carefully, proven unsuccessful in too many cases. Diarrhœa has often resulted from its use. Numerous attempts have been made to put it up for the market in such a shape that little time and no intellect might be required for its final use. *Loefflund's* article has the merit of being no fraud as far as I know; that of *Liebe* I paid attention to when it was first largely advertised for sale. A dozen bottles contained in a box were examined; their consistency and composition differed considerably. Another preparation, alleged to be compounded according to the prescription of the great chemist, is sold with the name of his son, *Herman von Liebig* attached to the recommendation of the label. He has a great deal *too much* to say in its praise. "1. This remarkable preparation accomplishes everything that can be expected of a substitute. 2. Although the flour is a perfect nutriment in itself, I still recommend on my labels its mixture with cow's milk. 3. Where good cow's milk cannot be had, condensed milk may take its place. 4. Infants fed on cow's or condensed milk, ought to have it mixed with my flour." You see the unsophisticated public must come to the conclusion that the object and destination of this food is no other but to be purchased.

Next in order is *Nestle*, as widely known as plantation bitters and cider vinegar. This food consists of milk, wheat flour (alleged to be baked, for the purpose of crushing the cellulose and cell membranes), sugar, and salts. As a chemical critic says (H. Mueller, in *Pharm. Centralhalle*, xvi., 1875, n. 34), he publishes no analysis but advertisements only; and he knew how to advertise. I remember well when the people of New York awoke one morning to find their libraries increased by a big pamphlet containing the new revelation. It was written by no less a person than an emeritus university professor of pathology, in his time a justly celebrated man, Lebert, who passed his very old age in the neighborhood of where Nestle had established his health, life, and money-breeding factory. Every such pamphlet commences with a declaration of principles. This begins by telling the reader that cow's milk is more "nourishing" than human milk; that, however, the addition of water does not make it any more similar to the latter; and that the nursling ought to have cow's milk at once alongside that of his mother—probably to improve upon nature's plan. Then why does he want or recommend substitutes, if cow's milk does so well? even better than well? For the simple reason that if people would feed their own cow's milk, they would not purchase Nestle's; and in order to induce them to do the latter, he tells you that your cows may be tubercular, may be fed improperly, their milk may be adulterated with water, or may contain disease germs. Nestle's cows are not tubercular, we have to infer, are not fed improperly, their milk cannot be adulterated, nor does it contain disease germs—indeed not. For it is the milk of *Swiss cows*, with such a halo round their horns, that even that public-spirited institution, called St. John's Guild, of New York, publishes an advertisement of Anglo-Swiss food, on the last page of its pronunciamento on the bringing up and feeding of little children, which is distributed gratuitously, or for an annual contribution of three dollars.

We are assured that Nestle examines his materials very carefully, uses bread only made of the very best wheat, and the crust only; and that the starch is transformed into dextrine and sugar, under a pressure of a hundred atmospheres, by overheated steam. Thus Nestle's food is not only the very best nutriment for infants, but also for mothers who would fain raise a supply of milk in their own breasts, though it appears that that would be an uncalled-for desire in the face of all that is said about Nestle's food being a perfect substitute. All of which is respectfully submitted by Mr. Nestle's prompter, Prof. Lebert, or, perhaps, rather by Prof. Lebert's prompter, and most of which is untrue.

Many years ago, fifteen or more, when Nestle and Lebert discharged their pamphlets, advertisements, and agents upon America, I was induced to try and employ Nestle's food; I could not say that in children

of a few months or a year it did any harm; on the contrary, it was fairly tolerated by most of them. I consented even to add my name to those of others recommending the article—the only time I ever did so in my life. A few years after, another advertisement appeared which advised rather against the purchase of the former preparations and recommended the recent modification. It was then, at last, that I resolved to scrutinize what I had recommended in good faith without any examination. I found, 1, that the contents of a number of boxes did not closely resemble each other; 2, that the main substance was made up of starch; 3, that even the cell membranes were not equally crushed, and a great many not changed at all. It has also been found, and urged mainly by Eliza McDonogh (*Inaug. Diss.*, Zurich, 1877), that the fragments of the microscopic elements exhibit the appearance of mechanical destruction, and not that brought about by heat. J. Miescher also states that he finds no essential difference between Nestle and common flour. Iodine yields instantly its blue reaction; the starch elements are partly free, partly still locked up in their cells. Some particles are albuminous, they turn yellow with iodine. In his experiments the watery extract was alkaline, in those of McDonogh it was acid, and contained but little dextrine. Cnyrim found in the boxes examined by him, sugar and dextrine to the amount of 45.56 per cent., but still 20.76 per cent. of starch were left without any change whatsoever. And the result of Jacobsen's examinations is that the contents of the boxes are not alike.

Gerber, also a large advertiser, and Nestle's Swiss rival in America, claims to have improved Nestle's flour by a difference in the process of preparation; the methods of which, however, are not communicated. His flour is wheat, which is again praised as the one article containing all the material required by the growing body in the smallest possible bulk. The same enumeration of the elements is made of an organic salt, and their mixture with organic substances is spoken of as if it were a new discovery. Potassium and phosphatic combinations, albuminates, carbon hydrates, fats, are whirled about in the most impressive and bewildering manner by every one who has a cheap article for sale at a high price. The greatest stress is always laid on the presence in the article offered for sale of all the chemical elements necessary for the building-up of the body. But that presence alone, I repeat, is not sufficient; chemical figures and equivalents still enjoy too much respect and a sort of superstitious veneration. A *thorough preparation preliminary to digestion* is required, though the proportion of elements in a mixture were ever so appropriate. In regard to wheat, however, *this proportion is not the very best* at all, for wheat contains more starch than do barley or oat-meal.

In regard to both of them, Nestle and Gerber, Drs. Altherr and Lorch, in a little book entitled "On the Weighing of Infants for the purpose of determining the Nutritive Value of Woman's Milk, Cow's Milk, Nestle's and Gerber's Flours, and Liebig's Soup," Erlangen, 1877, have no great praise to bestow. Both are declared to be improper foods for the newly born and infants in the first few months; but they admit in the later months of life, when farinaceous foods of all kinds are well tolerated, they also may be given in the same manner. Similar observations have been made in the Child's Hospital, at Berne, Switzerland; and similar remarks are due to the *Anglo-Swiss Food*, which contains milk, some gluten, and plenty of starch, like the others.

In all of the twenty-two European infant foods examined by Eliza McDonogh, the starch was never changed to such a degree as to render the recognition of its source impossible. Wheat, corn, rye, barley, could always be recognized under the microscope. A number of the granules were broken up it is true, but many more were intact. Thus, not even the very exact and uniform distribution of the starch is accomplished. All of them consist of baked flour of some kind, either by itself or mixed with sugar, milk, or salts. There are some, however—for instance, that of Hartenstein—consisting of wheat and oats, which has not even undergone the baking process.

Part of these European preparations have been naturalized with us. Some have made a great reputation, and probably money for many beneficent manufacturers, agents, and salesmen. But they are not alone in the field. Saul slew a thousand, David ten thousand. Europe has twenty odd infants' foods, America more than twice that number. Infants must no longer complain of lack of interest roused in their behalf.

Nature is the same all over; the nature of all natural things alike; that of wheat, oats, and manufacturer, wherever they be found. Thus the same results in regard to the composition of "infant foods" are reached here as in Europe. But a few days ago I was pleasantly surprised by the brief statements of Dr. E. Cutter, who, for *Gaillard's Medical Journal* (Jan., 1882), has undertaken the task of studying (microscopically) all the infant foods in our market. His researches, naturally, refer mainly to the proportion of gluten to starch. And some of his statements I shall refer to here, desiring to give them the greatest possible publicity. I wish the brief article of his would be distributed in a hundred thousand copies, reprinted in every secular paper, read from every platform and pulpit of the land. For it is time that fraud should be stopped, and a nefarious trade suppressed.

Amongst the better preparations are *Mellin's Food*. It claims to be the only substitute for mother's milk, and not farinaceous. It is not the only substitute, but the starch is converted into dextrine, as in *Horlick's Food*.

Franklin Mills Wheat Flour contains more gluten than most of the rest. So does *Arlington Wheat Meal*, which is ground coarsely, and contains much gluten. Also *Hawley's Liebig's Food*, which contains wheat gluten cells, barley gluten cells, barley tegument, wheat starch, and cooked granular masses, which do not polarize light.

Mead's Mulled Wheat Flour, a coarse flour or meal, which does not polarize light well; a good preparation.

Baby Sop is made of unhulled oats, malted and crushed, and contains all its elements; gluten cells of characteristic shape, and starch grains smaller than those of wheat.

As you descend the ladder, there is *Keasbey & Mattison's Infant's Food*. No gluten cells; consists of grape sugar and dextrine, and claims to contain alkaline phosphates.

Mother's Breast-milk Substitute is better than its ignorant advertisements; it contains gluten cells, bundles of wheat starch, barley starch, and gluten granules.

Imperial granum, the salvator for invalids and the aged, an incomparable aliment for the growth and protection of infants and children, a superior nutriment in continued fevers, and a reliable remedial agent in all diseases of the stomach and intestines; that which makes strong bone and muscle; that which makes good flesh and blood; that which is easy of digestion, never constipating; that which is kind and friendly to the brain; and that which acts as a preventive of those intestinal disorders incidental to childhood—Imperial granum food, which claims that the starch, impurities, and soluble matter are effectually excluded, and that the gluten only is retained, *shows no gluten cells under the microscope*, and is no better than it should be, no better than common flour, which, when fine and white,

is deprived of three-fourths of its gluten, and no better than *Savory & Moore's Food*, which is also like common flour. (E. Cutter.)

Ridge's Food is advertised as "a perfect food for infants." Ephraim Cutter tells you how perfect a food it is. It contains the beard of wheat, wheat starch mass, starch bundles apparently of maize, caked mass of starch which does not polarize light, starch grains, starch granules, and small gluten granules. And he adds: "The proprietors must add gluten cells, at least in the proportion found in wheat or maize, to bring the product up to the standard of wheat flour."

Crosby's Brain and Nerve Food, which claims to be composed of vitalized phosphates from ox-brain and wheat-germ, consists almost exclusively of starch. There are no characteristic gluten cells, no nerve-fibre, no axis cylinder fibre, no ganglion, nor multipolar cell. The advertisement claims that the brain is that of the ox, but the label states that the brain is that of the fish. Label advertises 730 parts of starch in 1000, claims some gluten; if this exists, it is the granular gluten of common flour. There are 270 parts of so-called vitalized salts asserted to be in this food; that is, salts in connection with the organic substances named. If this *be so, all the albumenoids in all the foods* in the market are vitalized, also. There is but little gluten, if any, in this food. (E. Cutter.)

Blanchard's Glutena, 90 per cent. of starch, 10 of gluten, the reverse, exactly, of the claim made for the food.

Blair's Wheat-food, abundance of starch, no gluten.

Redmond's Cerealine, starch, very little gluten.

Durkee's Glutena, wheat, almost exclusively starch.

Farwell's Gluten Flour is advertised as "gluten left behind after the starch is blown out," contains starch, almost no gluten.

Victor's Baby Food is *said* to "resemble mother's milk closely," and *is* like cracker and biscuit ground up.

Taylor Brothers' Pure Bermuda Arrow-Root consists of *potato starch*, with an occasional addition of arrow-root.

Hubbell's Prepared Wheat, almost exclusively of starch.

No gluten is contained in *New York Food Company's* cold blast flour, barley flour, buckwheat flour, India wheat flour, Lost Nation wheat flour, Common Minnesota flour, Hazleton flour, Puritan flour, Patapsco flour, Underwood flour, fine granulated wheat flour.

Gluten Flour, New York Health Food Company, is common flour. The most superficial examination exhibits starch in abundance.

After all this, with all my heart I assent to E. S. Gaillard's editorial remarks, which are as follows:

"It is almost criminal that such great questions, affecting the health, and, therefore, the happiness and wealth of a nation, should be left to the ignorance of the miller and the baker; to the foolish customs of society, to the equally foolish test of the mere appearance of bread, and to the fashionable restaurants and hotels. Manufacturers of foods for the sick, and, above all, for infants, should be held to the strictest accountability. It is the highest duty of the physician to learn the facts in regard to meal foods, and to use his information for the benefit not only of the sick, but of the whole community." And experience shows, that as the committee report referred to expressed it last year, the community insists, with the utmost pertinacity, upon giving their babies, as soon as weaning time arrives, or before, such articles of food as they know nothing about. When an adult sits down to a meal and finds placed before him articles of food with which he is not familiar, he makes inquiries in regard to such articles before eating them. The baby, however, is credulously fed upon things with which the child, father, mother, or doctor has not the least familiarity; all of these foods which are sold in large quantities have a composition which is unknown to the public. When a manufacturer deigns to say anything about his merchandise, it is to the effect that the food offered is the best in the market, that it is the proper thing and only thing for children and invalids of all ages, that the relation of the albuminous substances to carbo-hydrates is exactly correct, and that a package costs a certain amount of money. In regard to this subject the public appear to be smitten with absolute blindness. They insist upon forgetting that the man who offers for sale, and advertises at a very heavy expense, does so, as society is constituted, for his pecuniary advantage solely. To say that when the article offered is not good it will find no market, is deceiving yourselves, experimenting on your baby, relying on the character of a single man or corporation, on the honesty or intelligence of the manufacturer's chemist, or his superintendent, or his workmen, on the nature and condition of the elements used in the composition of the article, and on ever so many influences, which can work before the manufactured article gets into the hands of the consumer. Why the sellers and advertisers of unknown compounds should be more trusted than those who raise and sell a simple article of food, such as milk, which is constantly adulterated, can hardly be perceived. Is it necessary to say that the factory furnace is lighted more in the interest of the proprietor than for the benefit of the public?

Still, in regard to the growing evil, which has assumed vast proportions, the profession is at fault, to a certain extent. There are but few but are aware of the inexpediency and sometimes danger attending the exclusive feeding of cow's milk, and look for substitutes. Examples of infants thriving on almost any food are numerous; the public taste runs in the direction of the unknown; thus the responsibility of advice or assent is but a slight one; many of the foods in the market come in a pleasant form and convenient for use; thus the food-business firm certainly thrives. Professional men have become used to look upon the sale of patented foods as something quite unobjectionable. Those imbued with the strictest sense of ethics, who would not patent an invention, nor tolerate the fellowship of a professional man who so does, who frown upon patented medicines, because they are unknown and unknowable compounds, who object to reducing medical science to a mercenary standpoint, these very men forget their habits and principles when the question of patent-right and secrecy comes up in regard to patent foods. If I add, that many of the scientific journals of Europe, particularly those in Germany, dedicated to the study of children's diseases, are frequently used for the purpose of discussing the merits and effects of some new infant foods, it is only to show to what extent the evil has grown.

No profound thinking is required to appreciate the fact that a great many of the articles offered for sale are unmitigated frauds; and that a few are available compositions. But the very fact that they are compositions, that everything organic may spoil, that every compound depends on too many circumstances which are apt to interfere with its uniform condition, and that when you rely on a compound, you rely at the same time on a proprietor, his foreman, his workman, his chemist, you feel that you are easily deceived or disappointed. Besides, for an article, the constituents of which you can purchase at a low price, you are taxed to an inordinate extent.

And why all this? Because cow's milk is found to be defective, when compared with mother's milk. These defects I have pointed out. It contains too much fat, and too much caseine, the latter of abnormal condition. Instead, however, of correcting the faults of milk,

the latter is simply superseded and exchanged for something else. Is potato starch or even wheat, more similar to mother's milk, than is that of the cow? Now the proportions of fat and caseine can be regulated by the addition of water; but dilution is not the only function of the water added to the milk; the digestibility of the latter is also increased.

When albuminous material is subjected to artificial digestion with pepsin, and the process ceases, it recommences when more water is added. When the amount of water in the mixture is large, digestion will take place in a lower temperature than without it. Many digestive disorders in the living are due to lack of water, particularly in infants, who seldom or never are supplied with it in addition to what they obtain in their regular food. Infants who are apt to perspire much, either well or rachitic, who are kept in warm beds most of the time, who are exposed to summer heat, and lose much moisture through their skin, ought to be offered water a great many times in the course of the day. Particularly fat infants, who are mostly developing a rachitic or scrofulous disposition, ought to drink plenty of water. It accelerates tissue changes, and, therefore, animals which are to be fattened are habitually deprived of water. The rule then holds good in infant alimentation, that food, whatever it be, shall be given in considerable dilution.

But in the face of all the advantages water has, it is by itself not the proper dilution for the *caseine of cow's* milk. Some admixture must be found which is apt to overcome the dense coagulations of caseine referred to before. The particles of caseine must not be permitted to remain in close juxtaposition, but separated from each other to such an extent that coagulation in the stomach will take place in small loose flakes of the kind presented by curdling mother's milk. This object is accomplished by all farinaceous substances, without regard to their large or small percentage of starch; also by gum arabic, and gelatine. Of the farinaceous substances, I have but two to recommend, barley and oat-meal. And for good reasons. The starch they contain is more easily dissolved and transformed by saliva than that found in wheat, which is the stock in trade of the infant-food manufacturers. And, moreover, there is less of it in them than in wheat.

The barley and oat-meal are the two substances I mostly employ, as their chemical constituents are nearly alike, with the exception of a large portion of fat in oat-meal, which is not found in barley. Barley water, or thinned and sweetened oat-meal gruel, may be given to the child even at the breast. The indications for the use of one or the other lie in the condition of the infant. Where there is a decided tendency to constipation, I prefer oat-meal; where there is no such tendency, as usual, or perhaps even a tendency of the bowels to be loose, I employ barley. The "prepared" barley is a good preparation for older children only, for the whiter it is the larger is its percentage of starch. It is safest, as no mistake or deception can then take place, for every mother to grind the whole barley in a common coffee-grinder of her own. The younger the baby the more advisable does it become to boil the whole barley for hours, to secure the contents of the bran. A teaspoonful of either is boiled in from five to eight ounces of water, with some salt, for twelve or fifteen minutes, the decoction to be quite thin for very young infants, thicker for later months, and then strained through a linen cloth. Infants of four or six months are to have equal parts of this decoction (which ought to be made fresh for every meal), and of boiled cow's milk; some sugar besides. At an early age, the thin decoction, at a later, the milk ought to prevail in the mixture, which ought to be given at a temperature of 80–90°. The newly-born, which has to wait some days for his spring to open for him, is best fed with a mixture of from four to (in summer) six parts of thin barley water, and one part of boiled milk. A baby of two months will take the same mixture in the proportion of from two or three to one.

I beg leave to quote a single author. Biedert, a conscientious worker, the author of competent contributions to medical science, and particularly to infant hygiene, himself the inventor of a cream mixture for the use of well and sick infants, expresses himself in the following manner in the very circular accompanying his preparations: "The first demand on a method of nourishing infants must be this—that the nutriment is tolerated by all infants, including the feeble and sick, in a manner similar to mother's milk. Now I have found that a food coming up to this requirement, must not contain more than 1 per cent of caseine. Accordingly, cow's milk must be diluted with an indifferent thin decoction (oat-meal or barley.) In the beginning, the dilution must be in the proportion of 1 to 3 or 4; this admixture must be gradually reduced. This is the very mixture which surpasses all compounds thus far recommended, and all the artificial preparations." And still in the face of this testimonial, than which I do not wish a more positive one, he invents a cream mixture.

Though my remarks must necessarily draw to an end, I must not close without at least *one additional word* in regard to some other constituent of infant food, Beside sugar, which is required both by taste and physiological necessities, the addition of common table-salt in moderate quantities both to cow's milk and to farinaceous substances is advisable.

The addition of chloride of sodium to the food is the more important the more the milk is mixed with a vegetable decoction. Carnivorous animals crave no salt; herbivorous, however, a great deal, although in their food the *absolute* amount of chlorine and sodium is as large as in that of the former. They are easily drawn by hunters into fields and woods strewn with salt; and the instinct of mankind has early taught how to add more salt to herbaceous than to animal food.

We find that the craving for salt grows in proportion to the amount of potassium salts contained in the food. In that of herbivores there is twice or even four times as much potassa compared with its chloride of sodium as in that of carnivores; potatoes, with their large amount of potassium, combined with chlorine and phosphoric and citric (pomic) acids, necessitate the addition of large quantities of chloride of sodium. In the food of carnivores, however, who eat whole animals, one equivalent of potassium is nearly balanced by one of sodium and one of chlorine.

Potassium salts and soda salts both exist in the blood, the former principally in the blood-corpuscles, the latter entirely in the serum or watery part of the blood. There is chloride of potassium in both corpuscles and serum, but phosphate of potassium in the corpuscles alone. Now if there should ever be in the blood more phosphate of potassium than can be taken up by the corpuscles, it will be immediately decomposed by the chloride of sodium in the serum—chloride of potassium and phosphate of sodium are formed, and these are both rapidly eliminated by the kidneys, and pass away in the urine. By this means, chloride of sodium is carried away, and must be replaced: in other words, vegetable food requires the addition of a great deal of salt.

The substitution of cow's milk for woman's milk necessitates the addition of salt, for a similar reason; for while 1000 parts of human milk contain only 0.70 chloride of potassium, 1000 parts of cow's milk contain 1.30

There may be infants—I have been told of more cases than I have seen myself—who do not bear barley.

Others may not bear oat-meal. If so, or if for some reason or other it is wise or whim to discontinue them, it must not be forgotten that, though feeding a breastless child *without* cow's milk, appears preposterous, feeding with cow's milk *alone* is dangerous. I do not permit it. I want an admixture at all events capable of diluting, as it were, the caseine. For that purpose, and for that alone, I formerly recommended gum arabic or gelatine. However, our knowledge of these substances has since improved. Prof. Uffelmann, in Rostock, had a little patient, otherwise healthy, who carried a gastric fistula. Through a large opening in his abdominal and stomach wall, he experimented on the child's digestion. Unmistakable and numerous observations taught him that both arabic gum and gelatine are not only emollient and soothing, but directly nutritious. Thus the list of those substances which may be added to boiled cow's milk, to make it available as the regular food for infants, is by no means small. They all come up to the requirements we look for in such substances. They must be perfectly simple and recognizable. They must be accessible, and for sale everywhere. The mode of preparing them must be perfectly simple and easy. They must be cheap.

They must be as nearly the substitute of mother's milk as an imitation can be like the original. They must be alike for throne and den, for Fifth Avenue and Mulberry Street, for the wet-nurses for the throne and for Fifth Avenue come also from the dens and from Mulberry Street. It is not wise to forget that nature is republican in principle and democratic in practice. If too often there be no equality before a court of so-called justice, *there is* equality before that of physiological law.

CARTWRIGHT LECTURES.

ON THE EXPERIMENTAL METHOD IN MEDICAL SCIENCE.

Delivered before the Association of the Alumni of the College of Physicians and Surgeons, New York, February 7, 1882.

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LECTURE III.

NERVOUS DEGENERATIONS, AND THE THEORY OF SIR CHARLES BELL.

(*Concluded from p. 149.*)

WE will now pass to the second topic for the evening, namely, Sir Charles Bell's Theory of the Nervous System.

Sir Charles Bell's theory of the nervous system is of so recent a date, comparatively speaking, that its traces have not entirely disappeared from our nomenclature. The student will still find among the synonymes in some anatomical text-books such names as the "respiratory nerve of the face," or the "superior and external respiratory nerves of Bell." But the system of which these names formed a part has become so obsolete that their former significance is hardly remembered, and even the distinctive features of the theory itself have been forgotten in the discussion of more important topics connected with the nervous system.

Among the eminent medical men of the present century, perhaps none have attracted more cordial admiration than Sir Charles Bell. His earnest and strictly professional ambition, his restless mental activity, his versatility of talent, and his genial and enthusiastic disposition secured him a rapid success and a position of acknowledged superiority. "Anatomist, surgeon, author, artist, and critic," he taught anatomy by lectures and demonstrations, was the equal of Cooper and Cline in practical surgery, published his magnificent works on the *Operations of Surgery* and the *Anatomy of Expression*, illustrated by himself, and created the reputation of the Middlesex Hospital as a centre of medical instruction. When he received the Order of Knighthood, in 1831, at the same time with Herschel, Babbage, and Brewster, he thought more of his companions than of his title. "The batch," he said, "makes it respectable." He always retained a strong attachment to his early friends and family relatives, and to the pleasures and sports of a country life; and if he experienced some disappointment in regard to the success of his scientific opinions, this was fully compensated by his general popularity and his high professional reputation.

Bell's attention was especially attracted to the nervous system in 1807, a few years after his arrival in London, and while occupied as lecturer in a private medical school, established there by himself. In his demonstrations, he was struck with the apparent complexity of the nervous apparatus, and the difficulty of presenting it fairly to the comprehension of his audience. His mind dwelt persistently on this subject, with a view of reaching some more simple and intelligible arrangement of what seemed confused and disconnected. His thoughts were first directed to the anatomy of the brain, which, he says, at that time "occupied his head almost entirely."[1] He puzzled over the varied form and structure of the cerebrum and cerebellum, the processes, protuberances, and ganglia at the base of the brain, and the connections and course of the different cranial nerves. He tried to reduce these complicated parts to something like order in his mind, and to divine the secret of their anatomical relations.

This was the origin of his new system in cerebral anatomy, and when once it had assumed a distinct form, it grew in importance, and took entire possession of his conviction and imagination. He made it the subject of his lectures, and speaks of it in his correspondence with the greatest enthusiasm. "I hinted to you," he says, in a letter to his brother in Edinburgh, "that I was *burning* or on the eve of a grand discovery." "I really think this new anatomy of the brain will strike more than the discovery of the lymphatics being absorbents." "My object is to lecture it, to make the town ring with it, as it is the only new thing that has appeared in anatomy since the days of Hunter, and, if I make it out, as interesting as the circulation or the doctrine of absorption."[2]

Up to this time there is no trace of any experimental investigations by Bell in regard to this subject. His system was wholly inferential, and based on the visible facts of anatomical structure. But a year or two later he felt the necessity of making some experiments, especially as he had formed the intention of printing his views in a pamphlet for private distribution. He hoped, by this means, to elicit the opinion of the representative men of the profession, and to see whether his innovations would be likely to meet with their approval.

Accordingly, in 1810,[3] he records having made two experiments, with a satisfactory result; so much so that he believes he is now about to establish his system on facts "the most important that have been discovered in the history of the science;" and in 1811, his essay was printed, under the title, *Idea of a new Anatomy of the Brain*, submitted for the observations of his friends, by Charles Bell, F.R.S.E.[4]

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[1] Letters of Sir Charles Bell, selected from his correspondence with his brother, George Joseph Bell. London, 1870, p. 117.

[2] Letters of Sir Charles Bell, pp. 117 and 118.

[3] Letters of Sir Charles Bell, p. 170.

[4] Reprinted in the Journal of Anatomy and Physiology. Cambridge and London, 1869. Vol. iii., p. 153.

The idea developed in this essay, and the importance attached to it in the mind of its author, can be best understood from Bell's own account of its origin and growth. In a letter to his brother, a year before, he details his plan of investigation and the object he wished to accomplish. He had already reached the conviction, on anatomical grounds, that the several divisions of the encephalon were different from each other in function, and especially that a wide distinction of this kind existed between the cerebrum and the cerebellum. But how gain access to these deep-seated and vascular parts, so as to experiment upon them? This seemed too difficult an undertaking. It might be possible, however, to expose for that purpose the spinal cord and its nerve roots, and this is what he accordingly did. "It occurred to me," he says, "that as there were four grand divisions of the brain, so were there four grand divisions of the spinal marrow: first, a lateral division, then a division into the back and forepart. Next it occurred to me that all the spinal nerves had within the sheath of the spinal marrow two roots: one from the back part, another from before. Whenever this occurred to me, I thought that I had obtained *a method of inquiry into the functions of the parts of the brain.*"[1]

That is to say, experiments on the anterior columns of the spinal cord, or the anterior nerve roots, would throw light on the functions of the cerebrum, with which they were anatomically connected; experiments on the posterior columns of the cord, or the posterior nerve roots, would indicate the function of the cerebellum, to which, he thought, these parts belonged.

These are the experiments described in the *Idea of a New Anatomy of the Brain*, and this is the meaning attributed to them by its author. He found that irritation applied to the anterior part of the spinal cord produced contraction in the voluntary muscles; while a similar injury, inflicted on its posterior part, did not do so. On laying bare the roots of the spinal nerves, he could cut across the posterior fasciculus without convulsing the muscles; but touching the anterior fasciculus at once produced convulsions. "Such were my reasons," he says, "for concluding that the cerebrum and cerebellum were parts distinct in function, and that every nerve possessing a double function obtained that by having a double root."[2]

The distinction made by Bell between the two divisions of the encephalon is this: The cerebrum is the organ of the mind, of conscious sensation and volition. Consequently, the anterior roots of the spinal nerves, being connected with the cerebrum through the anterior part of the spinal cord, are subservient to both sensation and volition, and when artificially irritated cause contraction in the voluntary muscles. The cerebellum, on the other hand, presides over the secret or unconscious operations of the bodily frame, as in the vital action of the internal organs; consequently, irritation of the posterior columns of the cord, or the posterior nerve roots, has no perceptible effect on the voluntary muscles. A spinal nerve, accordingly, possesses two roots because it performs two sets of functions: one, those of consciousness and volition, derived from the cerebrum; the other, those of unconscious vital influences, derived from the cerebellum. The cranial nerves, however, have for the most part only a single root, and exercise but one set of functions, corresponding to their place of origin. Thus "the eighth nerve (par vagum) is from the back portion of the medulla oblongata, which belongs to the cerebellum; the ninth nerve (sublingual) comes from the front portion, which belongs to the cerebrum. The first is a nerve of the class called *vital* nerves, controlling secretly the operations of the body; the last is the motor nerve of the tongue, and is an instrument of volition."[1] This is the substance of the views contained in the essay of 1811.

Bell was much disappointed in the impression produced by this pamphlet. It turned out an "unpropitious experiment," for it "excited no criticism, and threatened to stifle the enthusiasm of the author." Bell himself says, regretfully, that this announcement from which he expected so much, "failed to draw one encouraging sentence from medical men." But we can hardly blame them very much for this apathy. The systematic ideas of the author, however attractive to himself, might not have the same interest for others; and his experimental proofs were certainly insufficient to command belief on their own merits. Indeed, we now know that they do not really bear the significance which he attached to them. The anterior and posterior nerve roots are not connected respectively with the cerebrum and cerebellum; and we cannot use them in our experiments to determine the separate functions of the brain. It was no doubt a suspicion of this physiological non-sequitur that prevented the profession at large from appreciating the pamphlet as its author had hoped.

But notwithstanding this temporary discouragement, Bell afterwards returned to the subject with new vigor, and soon came to regard his former work as only the introduction to a more extended system. In his first essay, the anatomy of the brain was the main subject of the research, the nerves and their distributions being only secondary; but in his theory as afterwards developed, the nerves and their distributions occupied the prominent place. This matter, in 1814, was already, he says, "ripening in his head," and in his lectures on the nerves for that year he promises to "lay open a fine system." Like his anatomy of the brain, this new system increased in importance the more he thought about it. Year by year he enlarged its proportions and seemed to anticipate from it greater results than ever. He gradually brought it into the form of a series of communications to the Royal Society. In 1819 he regarded it as nearly complete, and fully worth the labor it had cost; containing, as he believed, the materials of a grand system destined to "revolutionize all we know of this part of anatomy, more than the discovery of the circulation of the blood." By the time the first paper was ready for presentation he was abundantly satisfied with it, and declared that he had made "a greater discovery than ever was made by any one man in anatomy."

In this communication[2] Bell presented the main principles of his new arrangement of the nervous system with special reference to the nerves of the face. The paper had been prepared by its author with much care, and he offered it to the Royal Society as the result of several years of thought and investigation.

This time he had no reason to be disappointed, as the essay attracted everywhere attention and approval. In speaking of a reception which he attended soon afterwards "my paper," he says, "has done me as much good as if I had bought a new blue coat and figured French black silk waistcoat. One gentleman called it the first discovery of the age." He received a number of complimentary letters in regard to it, which he says were enough to show that he was "not a visionary" on the subject. "It will hereafter," he adds, "put me beside Harvey."[3]

This paper of 1821 well deserved the praise bestowed upon it; for it contained the announcement of Bell's

[1] Letters of Sir Charles Bell, p. 170.
[2] Reprint in the Journal of Anatomy and Physiology, p. 161.

[1] Reprint in the Journal of Anatomy and Physiology, p. 162.
[2] Philosophical Transactions of the Royal Society. London, 1821, p. 398.
[3] Letters of Sir Charles Bell, p. 272.

most lasting and undisputed discovery, namely, that the facial nerve, or *portio dura* of the seventh pair, was not a nerve of sensibility, but was exclusively a channel for muscular action and the nervous medium of expression in the face. The importance of this discovery, both scientific and practical, was abundantly manifest; and it was sustained by direct and satisfactory experiments on the living animal, as well as by observations on the human subject. It is evident that Bell did not get at the whole truth in regard to this nerve; for he represented its action as limited to the involuntary movements of respiration and expression, and considered the voluntary motions of the face and lips as provided for by the fifth pair. But it is very seldom that all the details of so complex a subject are mastered by one person or at one time; and the primary facts of the motor character of the facial nerve and its insensibility, as contrasted with the extreme sensibility of the fifth pair, were then fully established upon incontestable evidence.

Bell, however, was much more interested in the general plan of his new classification, than in any of its details, which he valued mainly as illustrations or proofs of his system as a whole. He continued to develop this system in a series of papers addressed to the Royal Society; and it was afterwards embodied, with some necessary modifications, in his *Nervous System of the Human Body*, published in 1830.

Bell's conception of the arrangement of the nerves was this: All the nerves of the cerebro-spinal system were divided into two great classes or groups. The first group was that of the *regular*, *original*, or *symmetrical* nerves; namely, the thirty-one pairs of spinal nerves and the fifth pair of cranial nerves. All these nerves arise by two roots, upon one of which is a ganglion; they pass out laterally, to successive divisions of the body; they are all subservient to voluntary motion and common sensibility; they are distributed to every part of the frame, but are symmetrical and simple in their arrangement. The second group was made up of the *irregular* or *superadded* nerves. These do not arise by double roots, and have no ganglia at their origins; they come off from the sides of the medulla oblongata and upper part of the spinal cord, and, instead of being distributed regularly to successive parts of the frame, are sent to remote organs, which they combine in functional activity. They, therefore, have the character of being superadded, for a special purpose, to the original system of regular nerves. They constitute the great group of *respiratory nerves*, which are distributed to a variety of organs, and instead of going out on each side straight to their destination, often pass through the body in a longitudinal or oblique direction. They are:

1. The facial, portio dura of the seventh pair; respiratory nerve of the face.
2. The glosso-pharyngeal nerve; distributed to the tongue and pharynx.
3. The par vagum, or pneumogastric; the nerve of the lungs, heart, and stomach.
4. The spinal accessory, or superior respiratory nerve of the trunk; distributed to the sterno-mastoid and trapezius muscles.
5. The sublingual, or the nerve of articulation.
6. The phrenic, or great internal respiratory nerve.
7. The long thoracic, or external respiratory nerve of the trunk.
8. The fourth nerve, or patheticus; distributed to the superior oblique muscle of the eyeball.

These are the nerves which produce the appearance of irregularity or confusion in the nervous system because they often cross the track of the regular, symmetrical nerves, and are distributed to organs already supplied by them.

This last fact gives the key to the functional peculiarity of the superadded nerves. According to Bell, an organ which performs only a single function has but one nerve supplied to it, and whenever an organ receives nerves from two or more sources, it is because it performs as many different functions. This explains why certain muscles, like the sterno-mastoid and trapezius, already supplied with nerves from the regular or symmetrical system, also receives branches from the respiratory system. The former nerves enable them to perform ordinary the acts of voluntary motion; the latter bring them into occasional involuntary unison with the act of respiration. This is illustrated in a still more striking manner by the two nerves distributed to the face; namely, the fifth pair, supplying the face both with sensation and voluntary motion,[1] and the facial nerve, or seventh, a superadded nerve, which controls the involuntary motions of the face in breathing;[2] or, as he says, "when the muscles of these parts are in associated action with the other organs of respiration."

The respiratory nerves, however, come into play, not only in the motions of respiration proper, but in all acts connected with the entrance and exit of air from the lungs; as, in speaking, singing, coughing, gasping, or sneezing. They are also the agents in all movements of expression, or the emotional affections of the frame. This is especially marked in the seventh pair, which regulates the involuntary changes of expression in the face. But it applies also to the manifestations of emotion in other parts; as, in the hurried respiration of anxiety, the retardation or quickening of the heart, and the sobbing of the diaphragm in grief, excitement, or depression. Under every strong impulse the central organs of respiration are stimulated or disturbed, and thus bring into associated action all their subordinate parts, as organs of expression.

Beside this, the nerves of respiration, wherever they may be, have more vitality than other nerves; for the movements connected with this function will continue to be performed after all manifestations of sensibility and volition have disappeared. Thus these nerves form a great system by themselves, distinguished from the ordinary or regular nerves by their mode of origin, their functions, their distribution, and their vitality.

Evidently, there was much of real value in these observations. They placed in strong relief the fact of associated respiratory motions. The expansion and collapse of the nostrils or lips, accompanying the action of the thorax, are occasional in man, constant in some animals, and always increase in proportion to the intensity of respiration. They are truly respiratory motions, as much so as those of the diaphragm. The sterno-mastoid and trapezius muscles are also brought into action whenever breathing is obstructed or laborious. The classification which Bell constructed on this basis, and illustrated with so much ingenuity, has a certain charm about it, and is plainly marked with the talent and originality of its author. But, even as a system, its joints do not all bear inspection, and it contained from the outset certain defects which become after a time plainly perceptible.

Bell showed by his experiments and observations that the seventh nerve controls the involuntary motions of expression and respiration in the face, and that these motions are abolished by its division or injury. If he had accepted this fact for its own value, and had assumed nothing further, he would have been secure. But he believed, in accordance with his system, that these involuntary movements were *the only* ones under control of the seventh nerve, and that sensibility and volition were provided for by the fifth pair. This idea influenced his mind to such an extent that he was led to conclude,

[1] Philosophical Transactions, 1821, pp. 410, 411, 413, 417; and 1822, p. 284.

[2] Philosophical Transactions, 1821, pp. 406, 410, 414.

after division of the fifth pair alone, that the voluntary movements of the lips were paralyzed, while those of respiration continued.[1] Magendie, on the other hand, who believed in nothing but direct experiment, soon afterwards repeated this operation on the fifth pair, and declared that he could not perceive any paralysis of the lips produced in consequence.[2] We now know that he was right, and that the fifth pair does not animate any of the superficial muscles of the face. If that be true, according to Bell's principles there ought to be *two* other nerves distributed to this part; one for its voluntary, the other for its respiratory functions. But, in fact, it has only the seventh pair, which serves for both.

Bell's classification of the respiratory nerves, with regard to their origin, is by no means perfect in its details. These nerves were said to differ from the others in having no ganglia at their roots, and in originating from a middle tract on the sides of the medulla and spinal cord. But both the pneumogastric and glossopharyngeal nerves have ganglia at their roots, which are as real, though not quite so conspicuous, as the Gasserian ganglion of the fifth pair. Again, the origin of nerve roots, in a nearly continuous line, from the lateral tract of the medulla and spinal cord, is certainly a marked feature in the glossopharyngeal, pneumogastric, and spinal accessory nerves. On the other hand, it cannot be asserted, with any plausibility, of the facial, sublingual, and patheticus.

The last-named nerve was associated with the respiratory system because it was regarded as causing the upward rolling of the eyeball in involuntary movements and emotional expressions. Everything connected with this subject had for Bell a great attraction. His book on the *Anatomy of Expression* was his earliest publication in London, and first called attention to him as a man of ability. He gave lectures on the same topic to professional artists, and the exercise of his talent in painting and modelling was always for him a source of pleasure in connection with his anatomical pursuits. This, probably, accounts for the rather forced amalgamation in his theory of the functions of respiration and expression.

But how does it happen that Bell omitted from his respiratory system the *intercostal* muscles and their nerves? One would think they had some claim to be considered as part of this great apparatus. They are constantly at work, and keep time with the diaphragm and lungs more steadily than any other outlying organs of respiration. But the intercostals are part of the regular symmetrical system of nerves, originating from the spinal cord, with double roots, and all the other features of their class. The author ignores this difficulty almost entirely, or alludes to it only so far as to surmise that the branches of these nerves which influence respiration are, "in all probability," derived from the same lateral tract of the spinal cord.[3] But there is not the least evidence adduced in support of this probability, and the assumption looks very much like reasoning in a circle.

The controversy once carried on as to the exact significance of Sir Charles Bell's doctrine and discoveries, was due in great measure to the singular obscurity of his style and his indefinite manner of statement. These defects were habitual with him as a writer, and in many instances are extremely marked. There are few pieces of harder reading than the preface and introduction to his *Nervous System of the Human Body*.[4] In attempting to account for this obscurity, the reader is sometimes left in doubt whether Bell really has any distinct idea to communicate, or whether he voluntarily stops short of its complete expression. One of these puzzling passages is the following. After speaking of the par vagum and the spinal accessory nerve, he says (page 47): "Directed in the next place to the portio dura, I wished to answer the question: Why does the nerve which supplies certain muscles of the face take an origin and a course different from the fifth nerve, destined to the same parts? *Guided by these considerations in my experiments, by inference I concluded* that on cutting across this nerve, all the motions of the face connected with respiration ceased, and that it had the origin we see, and took its course with the respiratory nerves, because it was necessary for the association of the muscles of the nostrils, cheek, and lips, with the other muscles used in breathing, speaking, etc." It is certainly impossible to determine from the phraseology of this sentence whether it contains the statement of an experimental fact or is only the expression of a hypothetical surmise.

Having enumerated again the various organs of respiration, he says (page 49): "It appears, then, that it is the distance and irregular position of the eye, nostril, mouth, throat, and larynx, and muscles of the neck, which require these diverging and apparently irregular nerves to connect them with the act of respiration, and without which they would have possessed no more attributes than the nerves of the limbs; that is to say, sensibility and motion."

There is nothing in the context to indicate from what point the eye, nostril, mouth, throat, and larynx are "distant" or why they should be considered as more "irregular" in position than the limbs.

One of the most curious instances of this peculiarity is a passage in one of Bell's earlier letters, describing his new system of the anatomy of the brain, and I think it hardly probable that any one now present will be able to understand exactly what he means by it. "I consider," he says,[1] "the organs of the outward senses as forming a distinct class of nerves from the other. I trace them to corresponding parts of the brain, totally distinct from the origins of the others. I take five tubercles within the brain as the internal senses. I trace the nerves of the nose, eye, ear, and tongue to these. Here I see established connections. Then the great mass of the brain receives processes from these central tubercles. Again, the greater mass of the cerebrum sends down processes, or crura, which give off all the common nerves of voluntary motion, etc. I establish, thus, a kind of circulation, as it were. In this inquiry, I describe many new connections. The whole opens up in a new and simple light; the nerves take a simple arrangement, the parts have appropriate nerves, and the whole accords with the phenomena of the pathology, *and is supported by interesting views*."

This indefinite style of expression extends, as in one of the passages just quoted, even to the description of experiments and their results. It is usually thought essential in reporting experiments, especially if bearing on new questions in physiology, to state all the particulars, so that the reader may form for himself some estimate of their value.

Bell habitually neglects this useful precaution. He generally omits all mention of the details of the operative procedure, often that of the species of the animal employed, and sometimes even whether it were living or dead at the time of the experiment. The consequence is, that doubts have been entertained on these points in regard to some of his most important investigations.

The truth is, Bell had no real faith in experimentation as a source of knowledge. He preferred to make his deductions in the first place from the details of

[1] Philosophical Transactions, 1821, p. 413.
[2] Journal de Physiologie, Tom. i., Année, 1821, p. 387.
[3] Philosophical Transactions, 1822, p. 287.
[4] First edition. London, 1830.

[1] Letters of Sir Charles Bell, p. 117.

anatomical structure; employing experiments afterwards to "prove" or "confirm" them, or to impress his convictions upon the minds of others. This is abundantly evident from his own express declaration in various parts of his work, as well as from the method he pursued in originating and carrying out his plans of investigation. With him, the conception of a system was the beginning and the end of the mental process; its experimental evidence was only an intermediate episode. For this reason, Bell would hardly be considered, at the present day, as a physiologist. Indeed, he never speaks of himself as such, but always as an "anatomist," whose whole pleasure is in "investigating structure;" and even his new doctrines and ideas he expressly designates as "discoveries in anatomy."

This explains, in some degree, his undue estimate of the two methods of inquiry. He had so high a regard for the results of anatomical research, that he believed them capable of also solving questions in physiology. Already, in 1808, three years before printing his *Idea of a New Anatomy of the Brain*, he "is sure," he says, "that he is correct," and that was before he had made a single experiment. And long afterwards he declared that the "few experiments which he has made were directed only to the verification of the fundamental principles on which the system is established." But the result of this method has been exactly the reverse of what he anticipated. The experimental observations which he undervalued form the only part of his system which has remained, while the attractive and harmonious classification, which he constructed with so much ingenuity on the basis of anatomical deduction, has now lost its importance and almost its place in medical literature.

The value of the experimental method in medical science cannot be measured by the direct results of any particular discovery. It is true that these discoveries are often of great importance, and increase largely the fund of our medical knowledge. They possess, moreover, a vitality which distinguishes them in a marked degree from the ephemeral products of scientific hypothesis. When a hypothetical system has served its time it disappears, and is replaced by a different one; but the knowledge derived from experiment remains serviceable long after its novelty has passed away. The experimental observations of Galen on the recurrent laryngeal nerves and on the function of the arteries as bloodvessels are as conclusive now as when he first made them, and retain at this day their full value. They have lasted for over seventeen centuries, and have survived during that time all the fluctuating medical systems of solidism and fluidism, of animism, vitalism, archaism, and iatro-mechanism. The information which they imparted was a reality, and is neither destroyed nor impaired by the lapse of time.

But the benefits of an experimental discovery extend far beyond its immediate limits. When a new fact has been established in anatomy or physiology, it is impossible to say what bearing it will have on other facts not yet discovered; and in the history of medicine there are many instances of curious observations which remained imperfect and apparently barren until subsequent discoveries invested them with an unexpected importance. It is evident that Galen's detection of the arterial blood-current in the second century was a necessary preliminary to Harvey's complete discovery of the circulation in the seventeenth; and the lymphatic vessels, discovered in 1651, were thought to be the agents of a slow and insignificant absorption, until Colin found, two hundred years later, that the daily quantity of fluids passing through the thoracic duct was from four to ten per cent. of the entire bodily weight. It is almost certain that a genuine investigation, however isolated at first, will produce, some time or other, its legitimate fruit. But to secure this object there is one essential requisite, and that is, that the experimental method be continued and cultivated for its own results, whatever they may be, without demanding or expecting immediate returns of a kind that can be designated beforehand, and with entire confidence that this method has always been, and will always be, the only source of permanent improvement in medical science.

ORIGINAL ARTICLES.

THE USE OF CONSTITUTIONAL REMEDIES IN THE TREATMENT OF EAR DISEASES.

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(*Concluded from p. 129.*)

AND this brings me to the consideration of those very serious cases in which inflammation originating within the tympanum gives rise to intra-cranial complications, either by direct extension through the thin partition of bone which forms the roof of the tympanum, or indirectly by causing periostitis and caries of the mastoid antrum and cells. In the descriptions given of the treatment of mastoid disease in the works of Dalby, Buck, and Burnett, constitutional remedies (except the recommendation of anodynes by the last named) are completely ignored, and, singular as it may appear, the same is true of the works of Allen, of Tröltsch, and of Roosa. The "treatment of mastoid disease," as described by each of these authors, consists of little else than an account of how and when to perform Wilde's incision and to trephine the mastoid process. But are these, together with the application of leeches and fomentations, the *only* efficient remedies at our command with which to combat this dangerous malady? and must we say, with Dalby, that "where inflammation of the contents of the cranium has actually commenced, the issue of the case is certain?" I think not. If mercury is indicated in periostitis of the tympanum, it is certainly imperatively demanded (unless there be positive contra-indications to its use) when the periosteum of the mastoid cells, or the dura mater covering the roof of the tympanum, is involved in the inflammatory process. Of course, the stage which the malady may have reached when the case comes under observation, will have much to do in determining the propriety of the administration of mercury; but it may be well to utter a word of warning against deciding too hastily that the favorable period for its exhibition is passed, for, if we examine the many cases that have been published in which perforation of the mastoid was performed for the relief of intraosteal inflammation, we shall be surprised to find *in how few of them pus was discovered in the antrum or in the smaller cells;* of course, in a day or two it made its appearance, but how much had the traumatism to do with this?

We have seen in the case related by Dr. Buck what may be accomplished in meningitis dependent upon inflammation of the tympanum, by the timely administration of mercury; and, although I have been so fortunate as to meet with but very few cases of middle-ear disease complicated by serious intra-cranial or mastoid inflammation, I am able to furnish from my own limited experience at least two cases which forcibly illustrate the efficacy of this drug under such circumstances.

The first case, which occurred several years since, was that of a highly intelligent lady, about fifty years of age, of rather delicate constitution, and subject from early life to periodical attacks of severe headache, who

had an acute suppurative inflammation in the drum of the left ear, which resulted in perforation of the membrane and the establishment of an otorrhœa. To check this, powdered alum was blown into the auditory canal (a method of treatment which, under similar circumstances, I would not resort to with my present experience), and the discharge was arrested. Within a few days after this, pain, referred to the left side of the head, made its appearance, and presently mild delirium and well-marked aphasia. These alarming symptoms continuing, in spite of milder measures (which included the application of leeches and the liberal administration of bromides), with the approval of my grandfather, the late Prof. N. R. Smith, to whose wise teachings I owe much of the knowledge that stands me in best stead in dealing with both eye and ear diseases, and especially an abiding faith in the power of mercury to control inflammatory action, a seton was inserted in the left temple, and small doses of the biniodide of mercury,[1] to be taken three times a day, were prescribed. Under this treatment, which was kept up for a considerable time, an amelioration of all the unfavorable symptoms soon became manifest; and finally the aphasia, which persisted in a remarkable and most interesting manner for some time after the disappearance of the pain and delirium, vanished, and the patient's recovery was complete. And to-day she is in sound health, and in the possession of a brain which affords her an intellect of exceptional force and clearness. I should add that syphilis was certainly not an element in this case.

The other case is of recent occurrence—indeed, is still under observation. A man, twenty-three years of age, employed in an iron foundry in this city, came to the Baltimore Charity Eye and Ear Dispensary on the 7th of December, with hearing markedly impaired, and complaining of pain in the left ear. The right ear was blocked, and the left partially occluded, by impacted cerumen, the removal of which, however, did not by any means restore the hearing of either ear. The tympanal membrane of the left ear was opaque, thickened, and presented a sodden appearance; that of the right was somewhat dull, and not of normal translucency. My opinion was, that the deafness not relieved by the removal of the impacted cerumen, was dependent upon chronic middle-ear catarrh, and that the pain in the left ear, which he had felt at intervals for several weeks, was due to a more active inflammation in the tympanal membrane, or perhaps in the drum cavity, caused by the mechanical irritation of the impacted wax. I expected, therefore, that the removal of the latter would be followed by the quick subsidence of the pain, and was surprised to learn, two days afterwards, that there had been no diminution in it. The Politzer bag having been used (more especially to relieve an obstruction of the right Eustachian tube), an anodyne drop, to be instilled into the left ear, was prescribed, and the patient was directed to report in three days. When he returned at the expiration of this time (December 12), I discovered that the left mastoid region had become swollen, red, and very sensitive to the touch, and I learned that the pain, which was now chiefly post-aural, had increased greatly in severity. The appearance of the tympanal membrane, however, had undergone no appreciable change, and the Eustachian tube was pervious to the Valsalva method of inflation, the air entering the drum cavity with a dry, non-perforation sound. The true nature of the malady was now for the first time apparent, and I recognized at once that I had to do with an inflammation of the mastoid cells, evidently brought about by an extension into the antrum of the inflammation which started in the tympanal cavity.

Upon making this discovery, the patient was immediately placed upon biniodide of mercury, $\frac{1}{16}$ gr. to be taken three times a day, and four leeches were ordered to be applied beneath the auricle and just below the mastoid process, free after-bleeding to be encouraged. As there was no fluid in the tympanum, the membrane was *not* incised. Two days after this, although the pain had been relieved by the leeching, there was no improvement in the other symptoms; but, on the contrary, the redness, swelling, and tenderness of the mastoid had increased, a buzzing had begun in the left ear, and the muscles of the left side of the neck had become so sore and stiff that the patient carried his head as in torticollis, and could not, without great suffering, turn it to either the right or the left. If I had been *a thoroughly orthodox* aural surgeon, I certainly would have made, at this stage, a free incision over the mastoid, or perhaps would have opened the antrum. Instead of doing either, however, I gave the patient two powders, each containing four grains of calomel and ten of rhubarb, and directed him to take one at bedtime that night and the other on the following night, and, unless his mouth became sore, to continue the biniodide as before; and the wisdom of this course was made evident when the patient reported two days later (December 16), seemingly a different man,—his head no longer twisted to one side, the post-aural redness entirely gone, and the swelling and tenderness greatly diminished. He had taken the two powders, he said, the first one having acted quite freely upon the bowels, the second one less decidedly, and as he "had a bad taste in his mouth this morning," he had omitted the mid-day dose of biniodide. As there was no evidence of ptyalism, he was directed to resume the biniodide, and to take a third calomel and rhubarb powder at bedtime. On the morning of December 18, the soreness and stiffness of the neck had disappeared entirely, and no trace of the tenderness or swelling over the mastoid remained. The last powder had acted but once upon his bowels, and "yesterday morning," after taking the biniodide, his mouth had felt "a little sore," and he had not taken it since. The drums were inflated by Politzer's method, and he was told to resume the biniodide.

It is unnecessary to give a detailed account of the further progress of this case. Suffice it to say that, continuing the biniodide, commencing on the 23d to use a gargle of iodine and iodide of potassium, and the Politzer bag being used every day or two, he improved uninterruptedly until the 26th, when he indulged in a Christmas frolic—driving in a wagon six miles into the country, drinking "about four glasses of eggnog," and returning after nightfall. As a consequence of which he had for several days a slight return of soreness in the muscles of the neck, and an uncomfortable feeling in the back part of the head. As a precautionary measure, the dose of biniodide was increased on the 28th to $\frac{1}{12}$ gr., three times a day, and on December 31 he was feeling so well that he resumed his heavy work at the foundry, continuing, however, the mercury and the iodine gargle. January 6, he reported himself all right, except a scarcely perceptible tinnitus in the left ear, observable only upon lying down. He had suffered no inconvenience from the biniodide, and his work had produced no unpleasant results. The dose of mercury was reduced to $\frac{1}{16}$ gr. [To-day (January 8), he reports at my office for a careful examination. Since the use of the Politzer bag at his last visit, he has had no return of tinnitus, and he describes himself as feeling perfectly well in every way. The left tympanal membrane is rapidly regaining its normal appearance, and there is no depression of either drum-head. The left ear, which at one time, after the removal of the impacted cerumen, could distinguish

[1] I regret to say no written record of this case was kept, and I am not positive as to the exact dose in which the mercury was given; my impression is, however, that it was not more than $\frac{1}{16}$ of a grain.

the tick of the watch at only 2″, now hears it at 54″; and the right ear, which formerly heard it at but 20″, hears it to-day at 50″; while with each he can understand words and questions spoken in a whisper at 20′ with normal acuteness. Both Eustachian tubes are pervious to Valsalva, and no change in hearing, or perceptible alteration in the position of the tympanal membranes, follows Politzer's method of inflation. The biniodide (which he takes without the slightest inconvenience) and the gargle will be continued for some days longer, as a measure of precaution.]

And now, since my enthusiastic convictions regarding the value in diseases of the ear of the much-maligned mercury have led me to speak at such length of this one agent, I can only briefly allude to the other constitutional remedies which I have employed with advantage in aural practice.

From *iodide of potassium* I have not obtained the decided results which mercury has afforded me; nevertheless, in syphilitic affections of the middle and internal ear it may be substituted for the latter with undoubted advantage in some cases; and when middle-ear changes are associated with a rheumatic diathesis, it is, unquestionably, of service. It should be given in the same doses as when prescribed for other maladies. I have had no experience of the *heroic* method of administering it, but we have the excellent authority of Dr. Roosa for believing in its efficacy in specific inflammation of the labyrinth.

Allusion has already been made to *muriate of ammonia* as a useful remedy in mucous catarrh of the tympanum. Hinton recommends this agent in tinnitus.[1] I have no reason for thinking that it exerts a specific influence upon this particular symptom, but as I have very excellent reasons (from a somewhat extensive use of it) for considering it efficacious in subacute and chronic middle-ear catarrh, and as tinnitus is so often dependent upon one or the other of these conditions, I believe it does in this way frequently relieve this troublesome complaint. To adults I generally give it in ten-grain, sometimes in fifteen-grain, doses, dissolved in two drachms of water, four times a day, directing it to be taken in a little water; to children I give it in five- to eight-grain doses, and often add to the solution a small quantity of syrup of tolu. I would recommend it especially in the secretory or true form of middle-ear catarrh.

Another remedy to which I would direct the attention of those who are engaged in the treatment of ear diseases, is *pyrophosphate of soda*. For a knowledge of the virtues of this medicine I am indebted to Dr. Alan P. Smith. For a number of years he has employed it as an internal remedy in furuncular and carbuncular inflammation, in eczema of the auricle, or upon other parts of the body, and, indeed, in almost exactly the same conditions in which sulphide of calcium has been recommended. He regards it as a remedy of great value, and tells me he has frequently obtained very positive and unmistakable results from it. My own experience with it has not been very extensive, but I am sure I have seen it do good in furuncles in the auditory canal, and in acute suppurative inflammation of the middle ear, and I am certain I have seen hypopyon diminish under its influence—a crucial test of its powers. It should be given dissolved in water, in doses of from ten to twenty grains every two, three, or four hours, according to the urgency of the symptoms. It is not very soluble, so that in prescribing it at least half an ounce of water should be ordered to each twenty grains of the salt.

As to the efficacy of *sulphide of calcium*, of which Ringer speaks so decidedly, and to which Dr. Sexton has recently directed the attention of aural practitioners, I am not yet prepared to give a positive opinion. In some cases of furuncular inflammation of the auditory meatus, however, it has seemed to exert an influence for good which could hardly be doubted.

My experience with *arsenic* (Fowler's solution) in eczema of the auricle and auditory canal leads me to look upon it with more favor than some authorities are disposed to regard it. I consider it applicable, however, only to the chronic forms of this affection.

Almost all writers upon diseases of the ear have something to say concerning the usefulness of *cathartics*. Those which contain *calomel* are, according to my experience, the ones to which the aural physician may resort with the greatest confidence. I have inherited a partiality for a powder composed of calomel, rhubarb, and scammony (calomel, powdered scammony virg. āā 2–4 grs.; powdered rhubarb, 5–10 grs.); it is not a pleasant mixture to take, and with children and fastidious adults I sometimes give simply the calomel in two or three teaspoonfuls of syrup of rhubarb. Of the great good which may be accomplished by the administration of three or four such powders, at intervals of from twenty-four to forty-eight or more hours, according to circumstances, in very many cases of acute eczema of the auricle (especially that variety which we see so often in children associated with so-called *strumous* ophthalmia), of diffuse and furuncular inflammation of the auditory canal, and of simple and complicated acute otitis media, I do not need to speak with hesitation, as I have seen it demonstrated upon too many occasions.

It is scarcely necessary to allude to the value of *tonics* in many affections of the ear. I would, however, call attention to the excellent results which may be obtained from the *phosphates of iron, quinine, and strychnine in combination*,[1] in otorrhœa and in eczema of the external ear, especially when they occur in delicate children.

Although I have tried the various remedies which have been suggested at different times for the relief of tinnitus, such as *bromide of potassium*, *hydrobromic acid*, *ergot*, *belladonna*, *nitrite of amyl*, etc., I regret to say I have not obtained very decided results from any one of them. When this symptom is dependent *solely* upon hyperæmia of the labyrinthine vessels, the bromine combinations and ergot, especially, ought to exert a beneficial influence; in the more obstinate cases, however, this is, in all probability, not the usual, or at least not the sole cause, but there are others, such as anchylosis of the foot-plate of the stapes to the margin of the oval window, thickening of the membrane of the round window, etc., which, of course, are beyond the reach of such drugs.

As I have no especial suggestions to offer regarding the internal administration of *anodynes*, and as almost every work upon the ear commends their use when occasion requires, I will content myself with this brief allusion to them, and so avoid prolonging unnecessarily this already too prolix paper.

There is a tendency upon the part of all specialists —whether medical or not—*to become too highly specialized*. In the specialist who devotes himself to the study and treatment of diseases of the ear, the otologist, this tendency is manifested most conspicuously in a disposition to *over-estimate the value of purely local measures*, and to *under-estimate the value of constitutional measures*, in the treatment of the maladies with which he has to contend. In calling attention to this shortcoming of his, I believe I have not done a work of supererogation.

[1] Supplement to Toynbee's Diseases of the Ear. H. K. Lewis. London, 1868, p. 464.

[1] I employ a syrup prepared by Messrs. Sharp & Dohme, of Baltimore, containing in each fluidrachm, phosphate of iron gr. j, phos. quinia gr. j, and phos. strychnia $\frac{1}{32}$ gr., giving to children from 15 to 30 drops, and to adults one teaspoonful three times a day.

MEDICAL PROGRESS.

Heaton's Operation for the Radical Cure of Hernia.—In the *Boston Medical and Surgical Journal* for January 12, 1882, Dr. George W. Gay reports 15 cases of hernia in which he employed Heaton's method of injecting the fibrous tissue of the inguinal canal and ring with a preparation of white-oak bark, and applying pressure by means of a compress and bandage to keep the canal closed, and prevent the descent of the hernia until the contracted tissues become strong enough to support the strain imposed upon them. Of these cases 4 were cured; relieved, 8; not relieved, 3. Number of ruptures, 18; cured, 5; relieved, 8; not relieved, 5. Number of operations, 23.

With two exceptions, the above cases seemed to be favorable ones for the operation. That it was not more successful may very likely be due, in part, to the lack of skill and experience in the operator; in part to the imperfect after-treatment, especially in several instances, occurring in the out-patient department of the hospital; and, finally, to the fact that a second operation could not be obtained in several cases, in which not quite sufficient contraction resulted from the first.

While Dr. Gay does not feel justified from his limited experience, extending over only four years, in expressing a decided opinion as to the real value of the oak-bark treatment of hernia, yet his impression is that in the inguinal variety of the affection it is often a good method, and is worthy of further trial and study at the hands of competent surgeons. It would seem peculiarly adapted to cases with small rings, and to cases occurring in children, when nature herself is making a constant effort to correct the deformity, and requires but little assistance to enable her to accomplish the result.

Nothing is stated as to the merits of the operation in other kinds of hernia; but in the one under consideration it can be concluded that it is safe; it is not very painful; it is not very difficult to perform; it does little harm, even if it does no good; it will cure a certain number, and will relieve others.

Benzoic Acid in Rheumatism.—In acute articular rheumatism, Prof. Senator prescribes benzoic acid in preference to salicylic acid. He gives it in doses of from two and a half to three drachms, and benzoate of soda in doses of from three to three and a half drachms, daily. In more than twenty cases of which observations are reported, cure has taken place rapidly under the influence of these drugs, without complications or relapses. They are not, however, equally efficacious in subacute or apyretic rheumatism.—*L'Union Méd.*, Jan. 14, 1882.

Locomotor Ataxy in Sewing-machine Operators.—M. Guelliot has made a study of two cases of locomotor ataxy occurring in sewing-machine operators, and concludes:

1. That in cases of hysterical women, in whom a predisposition to locomotor ataxy exists, work on the sewing machine may occasionally be the cause of the development of the disease.

2. The symptoms appear first in the lower extremities, and gradually ascend. The darting pains occurring in flashes in the limbs from below upwards.

3. Under the influence of repose, a rapid improvement, which may be of long duration, is generally observed.—*L'Union Méd.*, Jan. 10, 1882.

Long Interval in the Birth of Twins.—Dr. Baranski reports the case of a woman who was easily delivered of an imperfectly developed male child and its placenta, and who, finding herself doing well, recommenced her ordinary house-work. While working in the fields, seventeen days after the birth of her child, a fresh discharge of liquor amnii occurred, unaccompanied by pains. Dr. Baranski was called to her the next day, found an arm presenting, and delivered her of a well-developed and unmacerated child. The placenta followed spontaneously.—*Centralb. f. d. Med. Wissen*, Dec. 17, 1881.

Relation of the Terminations of the Motor Nerves with Muscular Contraction.—M. Ch. Richet, at the meeting of the Société de Biologie, November 26, 1881, presented some facts which may serve to explain the rôle of the motor-nerve terminations in contracture and in the muscular function in general. When a limb, in a condition of contracture, is deprived of blood, the contracture disappears in from three to four minutes; the muscle, however, still remains excitable. The nerves also preserve their irritability longer than is generally supposed; to demonstrate this, it is necessary to experiment with the sensory, and not with the motor, nerves, since the motor plates of the latter being paralyzed, no effect could follow their stimulation; thus, in dogs in which the circulation is completely excluded from the limbs, sensibility may remain for from two and a half to three hours. It therefore follows, that if the nerve and muscle preserve their irritability for such a time, when the contracture rapidly disappears it must be due to a paralysis of the motor-nerve terminations, whose vitality resembles that of the nerve cells. In retarding the circulation in the arm by a rubber band, the voluntary movements become almost immediately feeble and irregular.—*Gaz. Méd. de Paris*, Dec. 10, 1881.

Diagnosis of Ataxia by Ocular Symptoms.—Given certain visual troubles, such as feebleness, binocular diplopia, paralysis of one or more muscles of the eye, etc., is it possible to diagnose in advance that the patient will become ataxic? That is the question which Dr. Sous (*Journ. de Méd. de Bordeaux*, 27 Juillet, 1881), endeavors to answer. He classifies the symptoms in two groups: 1. Those which are dependent upon an alteration of the optic nerve; and 2. Those produced by lesion of some other nerve.

Under the first heading, those which warrant a fear of ataxia, are the following: Gradual diminution of the acuteness of vision up to complete blindness, disproportionate to the evident ocular lesions. Further, the restriction of the field of vision commences at the outer borders, and progresses towards the centre. The pupil retains its form, but becomes grayish-white; there is also an alteration in the perception of colors, particularly for green and red.

As lesions of other nerves, the author mentions paralysis of the extrinsic muscles, especially those innervated by the third pair; sometimes there may be transient spasmodic contraction of these muscles. Strabismus is also mentioned, binocular diplopia, sometimes transient, sometimes permanent, and myosis, the pupil being fixed.—*Journ. de Méd. de Paris*, Dec. 31, 1881.

The Condition of the Uterine Blood-vessels after Parturition.—Dr. Balin has made a careful study of the changes in the uterine blood-vessels after delivery (*Archiv f. Gynaekologie*, Bd. xv., S. 157), and arrives at the following conclusions:

1. A part of the vessels of the uterine substance is obliterated by connective tissue; those remaining have their volume considerably reduced.

2. In the obliterated vessels, the tunica media is destroyed by fatty degeneration of its muscular fibres.

3. In the remaining vessels, the tunica media partially disappears.

4. The fatty degeneration of the walls of the blood-vessels commences later, and goes on more slowly, than the same process occurring in the muscular structure of the uterus.

5. A large number of capillary vessels of new formation are compressed by the uterine contractions which follow delivery, and are also absorbed or transformed by fatty degeneration.—*Journ. de Méd. de Paris*, Dec. 24, 1881.

PENETRATING PISTOL WOUND OF THE BRAIN.—In the *Boston Medical and Surgical Journal* for January 12, 1882, Dr. J. FOSTER BUSH reports the case of a boy aged sixteen, who was shot in the forehead one inch above the centre of the right eye, the ball, a number twenty-two conical projectile, entering the brain. After the accident he became comatose, the pupils dilated, the right not responding to light, the mouth drawn to the left, and the left arm and leg paralyzed for both motion and sensation. Seven months later perfect use of the arm and leg returned, the dizziness and headache disappeared, and, with the exception of some loss of memory, he appeared to be perfectly well.

DIAGNOSIS OF OVARIAN CYSTS FROM EXAMINATION OF THEIR CONTENTS.—Dr. GARRIGUES states that there is no element characteristic of myxoid ovarian fluid in the sense that a single hooklet is characteristic of a hydatid, but that by carefully weighing all the physical, chemical, and microscopical properties of the fluid, together with the other features of the case, a correct diagnosis is generally possible, while he knows of no character by which a cyst of the broad ligament can be distinguished from an ovarian cyst.—*Amer. Journ. of Obstetrics*, Jan., 1882.

RADICAL CURE OF HERNIA.—In a paper read by Dr. W. ALEXANDER at the meeting of the Liverpool Medical Institute, held December 1, he concludes:

1. That ligature of the neck of the sac, so as to obliterate the accidental or congenital depression, that was at once the predisposing and exciting cause of the hernia, offers by far the best methods of radical cure.

2. That other methods of cure are only effective in so far as they obliterate the sac up to its opening into the abdomen.

3. That methods of strengthening the abdominal supports too often fail if the sac is not obliterated, since the continuous pressure of the hernia on the unobliterated part of the sac will almost certainly neutralize and overcome any amount of cicatricial resistance that we are capable of generating in the surrounding tissues.

4. That after ligature of the neck of the sac, it is unnecessary to further disturb it except by incision to solve the continuity between it and the neck, and thus obtain better occlusion of the ligatured part.

5. That the operation, if carefully performed, is far less dangerous than the method of refusing to interfere with the cases upon whom the operation is justifiable.—*Liverpool Med. Chir. Journ.*, Jan., 1882.

ACTION UPON THE FŒTUS OF MEDICINES TAKEN BY THE MOTHER.—Dr. KUBASSOW (*Centralblatt f. Gynäkologie*) has employed the microphone to observe the condition of the fœtal heart, and thus to judge of the action upon it of drugs administered to the mother. He arrived at the following results: Chloral-hydrate and chloroform first excites and then stupefy, causing the fœtus to become quieter, and the heart-sounds duller and slower. They act in five or ten minutes, the action of chloral being more powerful than that of chloroform, and especially marked when given as an enema. Both of them can be detected chemically in blood from the umbilical cord. Chloral-hydrate depresses the temperature of the mother after two or three hours. Opium and its alkaloids caused distinct and persistent rhythm of the fœtal heart. They act more slowly than chloral and chloroform, and their action lasts longer. The opium acts more powerfully and quicker by the mouth than by enema. Its action probably depends on the morphia which it contains. Digitalis also acts powerfully and persistently. The author considers that the chloral-hydrate taken by the mother is divided between her body and that of the fœtus proportionately to the weight of each. This occurs in fifteen minutes, so that at the end of that time five per cent. of the chloral given to the mother has passed into the blood of the fœtus. The chloral-hydrate is not decomposed into chloroform. More than half a gram of chloral-hydrate in enema, either given at once, or repeated in less than half an hour, or more than fifteen minims of tincture of opium given at once, or repeated in less than an hour, are dangerous to the fœtus. Opium should not be given to pregnant women in doses exceeding a quarter of a grain.—*Practitioner*, Jan., 1882.

CONJUNCTIVAL TRANSPLANTATION.—M. MARC DUFOUR, in the *Revue Médicale de la Suisse Romande*, reports four cases in which he transplanted the conjunctival mucous membrane of the rabbit to the human eye. He operated in two cases of ocular symblepharon. The adhesion having been dissected away, a fragment of the mucous membrane of the rabbit's eye was applied to the denuded surface, and fixed in place by sutures. In an early case, that of an old woman, the operation failed; the fragment became necrosed, the woman being old. The fragments had been fixed with silk sutures. A little later the operation was performed on a child, aged eleven, and the transplanted fragment was fixed on the eye and the eyelid at the same time. The success was complete, and two months afterwards the fragment was quite living. In the case of a man, after the removal of an epithelioma of the eyelid, M. Dufour transplanted some mucous membrane taken from a small tumor on the lower lip of the patient himself. This operation was completely successful; nevertheless, it had to be followed a year afterwards by a fresh operation, the disease having recurred. This time, also, a fragment of the mucous membrane of the lip was taken. M. Dufour recommends that the transplantation should not be made too soon after the incision; that the fragment to be transplanted should be previously fixed with sutures to prevent the rolling up of the edges. He recommends that the revivified place and the fragment should be washed with salicylic acid.—*British Med. Journ.*, Jan. 14, 1882.

POLYPI AND EXCRESCENCES OF THE FEMALE GENERATIVE ORGANS.—According to the clinical and anatomico-pathological researches of M. FORGET, the urethral mucous membrane may exhibit three distinct conditions:

1. Papillary hyperplasia, which is very frequently observed, and which gives rise to granular vegetations, a number being usually conjoined, while the true polypus is generally single.

2. The true polypus, or fibrous neoplasm, is usually attached to the mucous membrane by a pedicle.

3. Simple hypertrophy of the mucous membrane by which a prolapse, resembling somewhat a polypus, is formed.

M. Forget also believes that whenever there is a permanent spasm of the urethra, the intense congestion resulting is a sufficient irritation to produce fungoid growths.—*L'Union Méd.*, Dec. 25, 1881.

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PROGRESS OF SANITARY ORGANIZATION.

THE progress of sanitary organization in the United States is one of the marvellous features of our civilization. Scarcely a quarter of a century has passed since the first ripple of agitation was set in motion by Jewell, of Philadelphia. At that period, 1856, the purposes of sanitary organization in civil administration were either unknown or altogether ignored. The first call for a National Sanitary Conference fell upon dull and credulous ears, and it was only as a Quarantine Convention that the movement gained popular favor. But from the moment that the first Convention began to discuss the great questions of quarantine, and allied subjects, May 13, 1857, sanitary reform took deep and abiding root in the public mind of this country. The second Convention was an enthusiastic gathering of officials and laymen, and sanitary questions naturally became the leading topics of discussion. Two more annual Conventions met, each being more and more largely attended, when the civil war absorbed for the time the interests which this great popular movement had created.

In 1865–6, the agitation was renewed by a fierce struggle between the medical profession of New York and the notoriously ignorant and corrupt political organization which controlled the health department of that city. The average intelligence of its officers appears in the answer of one of the health wardens to the official inquiry, "What is hygiene?" The prompt reply was, "The mist which rises from stagnant water." So wide-spread was this agitation that not only did all ranks of citizens of that city become profoundly interested in the result, but other cities, especially Chicago, Washington, and New Orleans, were stimulated to action, and entered upon similar crusades against their inefficient health organizations. In 1866, the contest in New York culminated in the passage of the Metropolitan Health Bill, the most perfect sanitary act ever placed upon the statute-book. This law has furnished the text for much of the subsequent sanitary legislation in this country. The Metropolitan Board of Health was confronted, immediately on its organization, with Asiatic cholera, but so successfully did it deal with the first outbreak of that pestilence that public apprehension was allayed, and the Health Department became the most popular branch of the city government, a position which it has steadily maintained for sixteen years. From this period the agitation for sanitary reform took a new departure, and spread to the most remote parts of the country.

In 1869, the State Board of Health of Massachusetts, after prolonged opposition, struggled into existence, and in the following year the State of California organized its State Board. In 1871, the States of Louisiana and Michigan established State Boards of Health, and in the following year the States of Minnesota and Virginia followed their example. The year 1872 is memorable for the organization of the American Public Health Association, a body which at first consisted of a few earnest laborers in different sanitary organizations, but which now comprises a membership of upwards of six hundred persons, embracing the leading thinkers and workers in the field of State medicine. This Association, meeting annually in conference upon the current questions in sanitary science and administration, has exerted a large and most salutary influence. To its annual discussions, so widely published, we must attribute much of that popularization of subjects relating to public hygiene so essential to the thorough organization of sanitary government, and its successful administration. It has stimulated new scientific inquiries, has sustained feeble and wavering health authorities, has aroused popular thought, and awakened an interest of communities in the insanitary conditions under which the people live. During the decade of its existence sanitary organizations multiplied with unexampled rapidity throughout the country, no less than twenty-two additional State Boards, making twenty-eight in all, being established during that period. The crowning event, however, was the organization of the National Board of Health, which gave completeness and perfection to the scheme of sanitary government in this country.

We have made this brief review of the progress of sanitary organization not so much for the purpose of congratulating the medical profession upon the brilliant future which evidently awaits State Medicine in the United States, as to encourage and stimulate

to greater endeavor. The present time is exceedingly favorable for popular agitation of public health questions, and for effort to secure sanitary legislation. Popular lectures on hygiene attract large and thoughtful audiences during the winter months, and do more to stimulate thought and action among the people than any form of printed matter. Every physician can give two or three lectures on sanitary subjects to the community in which he resides, which we know from experience will attract larger numbers than the lectures of popular speakers. Again, at this season State Legislatures are generally in session, and the occasion is favorable to obtain necessary legislation. Though twenty-eight States have organized State Boards of Health, yet the great States of Pennsylvania, Ohio, Missouri, Texas, and the old New England States Vermont and Maine lag in the race. With suitable effort on the part of our profession, there is no doubt that in every remaining State boards of health can be established during the coming year. When this most desirable consummation is reached, the United States will present an example of sanitary organization hitherto unrealized in modern civilization.

THE NEW YORK STATE MEDICAL SOCIETY, AND ITS NEW CODE OF ETHICS.

IN our last issue we published the new code of medical ethics adopted by the New York State Medical Society. We observe, with extreme regret, that this representative and influential organization has committed itself, in this act, to regulations in antagonism to the code of the American Medical Association, and has placed its membership in a position which we believe to be essentially false and illogical. Under the head of "Rules Governing Consultations," it is declared that "members of the State Society, and of the medical societies in affiliation therewith, may meet in consultation legally qualified practitioners of medicine," and that "emergencies may occur in which all restrictions should, in the judgment of the practitioner, yield to the demands of humanity." A "*legally qualified practitioner*" is one possessed of a diploma from some duly incorporated medical college, and he may "trade under any special designation," as homœopath, eclectic, physio-medical, or other term, which may be best for his interests. That there may be no possible misconception of the latitude thus allowed, "all restrictions" may yield, in the sole judgment of the physician concerned.

Trading under a special designation has, recently, been formally condemned by the Royal College of Physicians, of London—the purest conservator of professional dignity and morality in the whole medical professional body. The New York Society condemns with pragmatical particularity such offences as publishing handbills, private cards, and advertisements, the details of cases, and opinions on points of medical or surgical practice, inviting laymen to be present at operations, and the boasting of cures, and remedies, etc., and yet, in a line or two, opens the door to the most reprehensible of all practices, viz., consulting with practitioners who owe their success to the use of some special trade designation. Dr. Jacobi, the President, in his prelusive address, prepares the way for the revolutionary code of ethics, but without committing himself to it, by stating that if "the profession of the State of New York are sufficiently imbued with that spirit of logic and experimental science, we may overlook differences, and meet, with a spirit of reconciliation, those who do not encounter us any more with the dicta of a school or sect." The Code of Ethics does not assume even such a conservative position, but makes haste to surrender every principle for which the regular profession has heretofore contended. There has been on the part of regular physicians no spirit of proscription against those irregulars who would abjure their special creed and trade designation, and rank themselves as physicians only. The warfare has been, not against the consciences of men, not against the right to treat diseases according to their convictions of the utility of therapeutical measures. It is the parading of a special designation, the offensive proclamation of "*similia similibus*," as the trade insignia, against which the great body of the medical profession has protested, and will continue to protest. All the glittering generalities which are now uttered to conceal the real point at issue, the authority of great names, and the momentary outburst of a humanitarian sentiment in a great medical society, will not blind the thinking men of the profession.

To yield the point, of the right to consult with all kinds of irregulars who happen to be "legally qualified practitioners," is to admit that the regular medical profession has hitherto occupied a false position.

To yield the point, is to admit that they who have maintained the truth of an exclusive dogma, and have practised on a trade designation, were right, and those who opposed them were wrong.

To yield the point, is to strengthen all irregular practitioners in their position of bigoted intolerance, and to confuse and dismay the disciples and friends of legitimate medicine.

We do not believe that the medical profession will thus stultify themselves, but that they will more energetically than before reaffirm the great principles for which they have steadfastly contended.

In some future issue we will set forth more specifically why legitimate medicine *cannot* consort with those who trade under special designations.

FORCED ALIMENTATION IN CONSUMPTION.

THE attention of our readers has been drawn to the method of forced feeding of consumptives. The loud acclamations with which the new expedient has been received have hardly died away when some accidents are reported. M. Desnos, whilst admitting the good which may be thus effected, reports a case in which bad results followed. The patient had tubercular excavations in both lungs. After the milk was deposited in the stomach by the tube, a violent attack of dyspnœa occurred, and the patient expectorated milk. Pneumonia came on, and death ensued in thirty-six hours. At the autopsy, the lesions of tuberculosis and of a recent pneumonia were found, and the milk filled the trachea up to the larynx. Also, M. Bariot, *interne*, of Charité, has published three cases of absolute intolerance of the method. In some cases diarrhœa results. Nevertheless, M. Desnos continues to advocate the method, advising certain precautions. The liquid (food) should not be given during the febrile exacerbations, and should be introduced slowly.

M. Ferrand reports a case of hereditary phthisis advanced to the third degree, in which forced alimentation produced a marked improvement from May to July; but then the patient retrograded, notwithstanding the method was persisted in, and died in November.

Further clinical experience is necessary before deciding on the value of the new expedient.

A BUREAU FOR NURSES.

FEW people who have not tried it, know the difficulty and delay experienced in procuring a nurse. Sickness and accident always come unexpectedly, and the nurse is wanted instantly. How is one obtained? The ordinary process is to get a list from the doctor, and then make, afoot, in car, or in carriage, a weary pilgrimage for an entire day, not seldom two, and sometimes three, before one can be had, and then we have to be satisfied with what we can get, rather than what we wish to get. The Woman's Hospital Training School, and the Nurses' Home, excellent as they are, can only furnish one of their own pupil nurses when she happens to be there, or occasionally a graduate. And yet, at the very moment when the patient is anxiously seeking a nurse, scores of good ones are waiting a chance to earn a living. What we need is something to bring together the two classes.

Boston has done some very good things, and in the nurse matter two years since took an important step in advance. The Medical Library Association appointed a committee to manage the affair, in conjunction with a committee of ladies interested in the various training schools, after this fashion: Their Assistant Librarian, who lives on the premises, is the Secretary, and keeps the Directory. A nurse who registers gives references to several physicians and families with whom he or she has nursed. If the replies to the inquiries which are made are satisfactory, the name and address are registered after the payment of a small fee, together with the qualifications, charges, what kind of nursing is preferred, whether he or she will nurse in contagious diseases, insanity, etc. This record is afterwards added to by inquiries of every doctor and family who obtain the nurse's services. A register is then kept of all engagements, whether made through the Directory or not, and the nurse is expected to keep the Secretary informed of every engagement taken, and again when it is terminated, in order to keep it perfect to date. Any one, then, going to the office, day or night, with or without such a list of nurses, can be accurately and instantly informed who are engaged and who disengaged, their qualifications, terms, etc.; or, if desired, by letter or telegram, the Secretary himself will secure and send a nurse as quickly as possible. Wet nurses, in many cases certified as to good health, nurses for the insane, etc., can also be had. It is evident that as the advantages of the system become known, the increasing patronage, both of nurses and patients, will be mutually advantageous, in adding to the number, and especially in bettering the quality of the nurses, and the more competent nurses will obtain more frequent employment.

Financially, also, it has proved a decided success, even from the start, inuring thus to the advantage of the Library. In Boston 412 nurses, of whom 46 are men, are now on the register, and the monthly average of nurses furnished last year was 74. Many of them were obtained by telegraph all over the New England States, and sometimes even from greater distances. One instance of premature confinement, when the pre-engaged nurse was unable to come, shows well how quickly the want may be supplied. Within an hour after the telegram was sent, a nurse had been found, made her preparations, and was at the patient's door, five miles out of the city.

We are glad to learn that the College of Physicians of Philadelphia lately has appointed a committee to consider the feasibility of establishing a similar Bureau in this city, and we hope most earnestly that it will be established, and that the profession will give it a unanimous and hearty support, both by advising their nurses to register, and in turn by sending patients to the Bureau to secure such nurses. The College having already a local habitation, is pre-eminently the body to establish such a system, and with a generous support from the members of the County and other Medical Societies and the public, it will become here, as it has in Boston,

one of the most useful and most successful advances that has been made.

CONDITIONS UNDER WHICH OXYGEN IS A POISON.

PURE oxygen inhaled for three days determines, in mice, fatal congestive and inflammatory pulmonary lesions. If the animals are removed before the expiration of three days, the pulmonary accidents are not necessarily fatal, and their intensity is more or less related to the duration of the oxygen inhalation, in dogs as well as in mice.

Injected into the veins, pure oxygen proves fatal to dogs whenever the tension of the injected gas, irrespective of its quantity, is equal to the muscular strength of the right heart. Injected into the arteries in the smallest proportion, oxygen gives rise to serious nervous symptoms, often fatal, dependent on gaseous embolisms. The lesions vary from a simple ischæmia, up to hæmorrhages and acute softening, indicating an obstruction of the capillaries by elastic, gaseous columns. Breathed in a state of high tension, pure oxygen is a poison, as has been established by the remarkable researches of Paul Bert, confirmed by the experiences of M. Feltz. Under all circumstances, the action of oxygen is exerted on the nervous system.

Notwithstanding that oxygen may, under some circumstances, prove a poison, it is, under many others, a most useful remedy. In the asphyxia produced by the inhalation of cesspool gases, it affords prompt relief, by renewing again the function of the red globules. In many kinds of dyspnœa, it is the most rational remedy. When the respiratory organs are unable to obtain a sufficient supply of air, although exerting their utmost efforts, the inhalation of oxygen at once relieves the distress. Quebracho is supposed to blunt the sense of want of air, but oxygen relieves it by furnishing the required material. Quebracho, then, merely renders the patient insensible to the source of distress, whilst oxygen removes the cause of it. For many cases of dyspnœa, oxygen is superior to its newest rival. Oxygen, again, has an important office in improving the condition of the blood in anæmia, chlorosis, and allied conditions.

THE CARTWRIGHT LECTURES.

IN our present issue we complete the publication of the admirable lectures of Dr. Dalton "On the Experimental Method in Medical Science." We congratulate our readers that they are able to find in THE MEDICAL NEWS, on the week of their delivery, these important contributions to the history of physiology. In all that concerns the historical development of physiology, Dr. Dalton is, of course, a master. It is most timely to have brought before the profession the history of the remarkable extension which the experimental method has given to physiological science. Now, when ignorant enthusiasts are trying to destroy the most important means for contributing to the growth of this science, should be marshalled in order the vast array of facts and principles which but for the experimental method had remained unknown. It is, also, but just to the great experimentalists of the past, that we recall their achievements, and apportion the merit as it is deserved. In the ever-enlarging annals of discovery, the exact share of each worker in the results attained is apt to be overlooked or forgotten, and thus it often happens that supposed discoveries are but revivals of former achievements. We owe, then, our thanks to Dr. Dalton for the historical data of physiology which he is placing so lucidly and completely before us. And we have again to congratulate the Alumni Association of the College of Physicians on the bequest of Mr. Cartwright, which is enabling them, annually, to have delivered a course of lectures which, we may hope, will equal those which have for so many years contributed so much to the renown of English medicine—the Gulstonian, Lumleian, and other lecture courses. It is to be hoped that the example of Mr. Cartwright will be followed by other wealthy men, who may thus perpetuate their names in connection with a worthy and useful purpose. The Cartwright lectures were inaugurated last year by Dr. Bartholow, of Philadelphia, who gave a course of six lectures on "The Physiological Antagonism of Medicines and between Remedies and Diseases."

THE DOCTOR HIS OWN PHOTOGRAPHER.

MEDICAL men very frequently want photographs in cases of injury, deformity, tumors, etc., but the trouble and expense have been serious bars to obtaining them; and many patients, too, cannot go to the photographer. Drawings are often even more expensive, and always labor under the disadvantage of possible inexactness. Recently, however, the introduction of the "dry-plate" process has so simplified the method, avoided the former dangers, and reduced the expense, that any one of ordinary intelligence and means can now take all the photographs he wants at a moment's notice. At the Cincinnati meeting of the American Association for the Advancement of Science last August, Mr. Walker, of Rochester, New York, showed a "pocket camera," which, according to Prof. Lattimore, supplies every want of the inexperienced amateur. Its weight is only two pounds. "Dry-plate outfits" are now to be had at a cost of $10 and upwards, which are excellent. Provided with one of these instruments, the doctor would always be prepared to photograph any case he desires, at his office or in the sick-room. Our hospitals, especially, should be provided with

such a good outfit, so that cases and specimens could be photographed at any time, even by a resident. Our microscopists would also find it exceedingly useful to make permanent many a transient preparation not suitable for preservation.

NOTE ON NERVE-STRETCHING.

DR. G. LUDWIG writes to the *Lancet* of January 7, detailing a new method of nerve-stretching without the knife, or subcutaneous nerve-stretching, which, in the hands of Nussbaum and Billroth, seems to have given good results. It consists in narcotizing the patient, and then forcibly flexing the femur against the abdomen, so as to stretch the sciatic nerve round the neck of the femur. The method is well worth a trial, and may be, perhaps, of great value, but we must point out one error which may easily be committed in adults. If the femur be flexed up to about 40° or 45°, with the lower leg in extension, all is well, but at that point the hamstrings are put in complete tension, and beyond it they must be over-stretched and ruptured to a greater or less extent, while the narcotized patient cannot feel the pain, and so warn us that in stretching the nerve we are damaging the muscles. By flexing the leg we relax the hamstrings, and avoid the danger. How much this may relax the nerve, too, and so vitiate the nerve-stretching, is a question.

REVIEWS.

RHEUMATISM; ITS NATURE, ITS PATHOLOGY, AND ITS SUCCESSFUL TREATMENT. By T. J. MACLAGAN, M.D. 8vo, pp. 333. London: Pickering & Co., 1881.

Since March, 1876, Dr. Maclagan has been known as the prophet of the salicin treatment of rheumatism. Before his earliest publication appeared, Stricker announced that salicylic acid had been used by himself and others in Germany with great success (*Berliner klin. Wochen.*, Nos. 1 and 2, 1876). Maclagan has continued to maintain the superiority of salicin, and has invented a theory of rheumatism to account for the success of his remedy. The book now before us is the result of this conflict. It treats of the natural history of rheumatism, of the nature of the rheumatic poison, of the lactic-acid theory, of the miasmatic theory, of the nature and action of malaria, and of the various plans of treating rheumatism. The special motive of the book is to show the relationship between rheumatic fever and intermittent fever, and to refer the origin of both to *malaria*.

In his discussion of the various theories of rheumatism, our author begins with the lactic-acid theory. He finds that there is in this disease a great increase in the formation of lactic acid, and also in its elimination; but he "rejects its claim to afford an adequate explanation of the phenomena of rheumatic fever." He believes, nevertheless, that the presence of lactic acid is a necessary element in the morbid complexus, but a result rather than a cause. There is, he admits, no other product of tissue metamorphosis to which the rheumatic symptoms can be ascribed; he therefore seeks to find the morbific cause, the pathogenetic material, without the body. He finds this in malaria. There is a remarkable correspondence in the phenomena of a rheumatic and of an intermittent fever attack, according to our author. He holds to the miasmatic origin of rheumatism, and to the identity of the malarial and rheumatic poisons. The outcome of his reflections on the appropriate treatment of the rheumatic miasm was salicin. Observe his ratiocination: "A low-lying, damp locality, with a cold rather than warm climate, are the conditions under which rheumatism is most likely to arise. On reflection, it seemed to me that those plants whose haunts best corresponded to this description, were those belonging to the natural order salicaceæ—the various forms of willow. Among the salicaceæ, therefore, I determined to search for a remedy for rheumatism." Could any premises and conclusions be stuffed fuller of fallacies? He did not find his best antimiasmatic remedy in quinine, which had been fully tried, but in salicin, whose derivative, salicylic acid, had already become well known as a most efficient remedy for rheumatism. Nothing is easier than to prophecy after the fact.

Dr. Maclagan believes that the "whole of the salicyl series is possessed of antirheumatic properties," but that "salicin and salicylic acids are the two which are at once the most easily obtained, and the most convenient for administration." The largest possible doses are necessary, for "the rheumatic poison is a minute organism, which is propagated in, and acts on, the fibrous tissues of the motor apparatus of the body," and "the salicyl compounds act by destroying this poison, but for its destruction a certain quantity is necessary." He concludes that salicin is preferable because it is safer in the considerable quantity necessary. He apparently ignores the important fact that salicin, in its passage through the body, is converted into salicylic acid.

The salicyl compounds, our author thinks, "cannot fail to prevent cardiac complications *if given in sufficient quantity to destroy the rheumatic poison before this has begun to affect the heart.*"

With some fact there is much theory of a very unsubstantial kind mixed up in this book. Nevertheless, it contains much suggestive matter, is very readable, and is an attempt to set forth novel views divorced from the errors which have prevailed for several generations.

> "'Tis neither antiquity nor author
> That makes truth truth, although time's daughter."

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 2, 1882.

FORDYCE BARKER, M.D., PRESIDENT, IN THE CHAIR.

The Society was called to order at 8 P.M. After the reading of the minutes of the preceding meeting, Dr. JOHN G. ADAMS, Corresponding Secretary, announced the death of the following foreign, distinguished medical gentlemen:

THEO. SCHWANN, of the University of Louvain, Belgium, who was the discoverer of the primordial cells in animals and plants, and a distinguished microscopist.

M. BRIERRE DE BOISMONT, distinguished as a writer on medical jurisprudence. Died in Paris at the age of eighty-one years.

SIR ROBERT CHRISTISON, author of a treatise on poisons, and Professor of Medical Jurisprudence in the University of Edinburgh.

Dr. BOUILLAUD, the last of the distinguished men who made the Paris School of Medicine so famous fifty years ago. Author of a work on diseases of the heart.

Died the latter part of October, 1881, at the age of eighty-three years.

The PRESIDENT then made an introductory address as follows:

One of the avowed objects of this Academy, as expressed in its constitution, is the promotion of the public health. Strictly speaking, all of our scientific work is in this direction, but this meeting is, in a larger sense, devoted specifically to this object.

There is not a physician in this city, engaged in active practice, who is not frequently called upon to see disease of various degrees of severity, often resulting in death, which has been caused by a poison. If we can see our patients early enough, we can successfully meet such poisons as arsenic, as corrosive sublimate, as aconite, and all of this class, because we have antidotes which will prevent their effects. But where the poison is introduced into the system so insidiously that the subject is unconscious of its absorption until its effects are produced, then it is not a question of antidotes, but the problem is, how shall we counteract its consequences, and how shall we keep our patients alive until the life-destroying agents have ceased to put in jeopardy the vital powers?

The special poisons to which I now refer, are the gases resulting from defective plumbing, to which all classes—the poor occupants of tenement houses, those who are able to command the necessaries and many of the luxuries of life, and those who live in the most expensive houses, and whose riches can buy everything but health—are alike exposed. None but physicians can know how general this poison is, and how positively it explains much of the disease that they are called upon to treat, and of the many sad deaths which follow.

When I assert that it is a daily experience with me to see persons whose general health is suffering from this poison, as is manifested by malaise, loss of appetite and strength, slight febrile symptoms, diarrhœa, physical and mental depression; and that I have seen infants, children, and adults suffering from diphtheria, scarlet fever of a mild type complicated with this disease, and destroying life; those in vigorous health, students in colleges, ambitious and active young men in the professions or in the commercial or financial world stricken down by typhoid fever, some struggling through the disease, and others dying, and that the cause has been demonstrated to be this poison, I only state facts which are common in the experience of all physicians in this city. In some cases this has been the result of ignorance of the very sanitary conditions which environed them. For example, two young men were stricken with typhoid fever, one of whom died. They were not acquaintances, but occupied offices in the same building in the vicinity of Wall Street. On investigation, it was found that there was not a trap in the whole building.

In a house, in which but a few months before several hundred dollars had been expended to put the plumbing in perfect condition, a young man died of typhoid fever, others of the family became ill, when it was found that a defective waste-pipe was saturating the house with poisonous gas. But such facts as these are so common and so well known to the profession, that I need not dwell upon them.

It is the custom of many in this city, whose means will permit them to do so, to take their families for health and pleasure to various summer resorts, at the seaside, the mountains, and other attractive country hotels, but every year, for some time past, some of these places have proved fatal to health, and often to life, by typhoid fever, so that now it seems to be the plain duty of every physician to warn such families as hold him responsible for their health, of the danger of every such resort that does not give them the evidence of a competent sanitary expert that their house is safe from all such dangers.

None but physicians are alive to the fact that many of those now living in beautiful and expensive houses in this city are like the inhabitants who dwell at the base of Mount Vesuvius, in a soft, balmy, voluptuous atmosphere, surrounded by vineyards and gardens luxuriant with the olive, and the fig, and the orange trees, which mask and hide the danger and desolation of the lava and ashes. It is absurd to suppose that those who find pleasure in expending many thousands in buying, and art to embellish their home, will not gladly expend the insignificant sum necessary to make their homes healthy for their families and themselves.

The physician should never be an alarmist; he never can hoist the signal of danger, except when he sees the forewarning signs of an impending storm. Unfortunately, he never can see the danger from this poison until its effects are already beginning to develop, as shown by the disease. Then, again, he labors under the difficulty of being unable to demonstrate, or even suggest, where the poison originates. He can only say that science has established the fact that certain symptoms are due to certain causes. It seems to me that it is the duty of the profession to educate itself up to the point of being able to demonstrate intelligently to patients how the danger from these poisons may originate.

The PRESIDENT then introduced Mr. CHARLES F. WINGATE, who proceeded to read the paper of the evening, entitled:

Practical Points in Plumbing—Knowledge Necessary for Physicians for the Protection of their Patients.

He said that it seems like carrying coals to Newcastle to offer advice to medical men regarding sanitation. Yet, as the old derisive proverb has been set at naught by "the whirligig of time," so it has strangely come to pass that the sanitary engineer can now assume to instruct his betters, and even show physicians their omissions in matters properly within their province.

He, therefore, limited his remarks to the practical points relating to plumbing, and kindred subjects which have a direct relation to the physician's efforts to overcome disease. When so much sickness can be traced to unsanitary conditions due in the main to preventable causes, it is desirable that the family physician should be able to point out such conditions, and in a general way suggest the proper remedies for them. When, also, so much foolish fear prevails regarding the risks to health from so-called modern improvements, the physician should be able not only to assure, but to convince his patients, that plumbing properly executed with good materials, and upon scientific principles, is absolutely safe, and is decidedly to be approved rather than abolished. Plumbing appliances are hence no more deserving to be done away with than are gas or electricity, the railway or the newspaper, each of which is also open to serious objections. Whenever sickness, such as is usually traceable to defective plumbing or drainage, prevails in a house, and no sufficient cause for its existence is apparent, the physician should not be content until an examination has been made by a health officer, or other competent person, to make sure that the house is free from sanitary defects. Nothing should be taken for granted in such matters, and no evidence accepted regarding the safety of hidden plumbing work, as underground drains, cesspools, traps, etc., except to have them open to view, and their real condition proved beyond a doubt. Every physician should warn his patients not to lease or buy any dwelling, whether old or new, without having the premises thoroughly examined, and obtaining a certificate of their healthfulness; not the ordinary landlord's or agent's verbal statement that everything is lovely, etc., but a legal document that will hold good in the courts,

and be a ground for obtaining damages in case the house should prove to be unsanitary, and sickness result in consequence. This wise precaution is now being taken by many persons. The examination, however, must be thorough, or it will be useless, as a false sense of security, based upon an incomplete examination, is worse than absolute ignorance.

The first point is how to examine a house. In this examination, nothing should be taken for granted. Every part of the plumbing must be exposed to view, or tested. The peppermint test is one of the best for detecting defective plumbing. An ounce of peppermint in a pail of water is poured into the openings of the plumbing fixtures at the upper part of the house. If the smell of peppermint escapes by a leak, this shows that sewer-gas would also escape. A second point is the quality of the details of the plumbing work. A single portion of the work, one joint of pipe, will tell a practised plumber the capacity of the workman. If a house is deficient in its minor details, it will be found generally bad. A direct leak from a pipe will be shown by holding a candle near it. The practised nose can tell a leak in a short time, and by the density of the smell from a roof-pipe, it can be learned whether there is a trap in the pipe to the sewer. The sanitary engineer goes first to the cellar and looks at the sources of damp. These are manifold both in the city and country; rain and snow blow in; there is leakage from the water-pipes and areas, and there is the refrigerator waste.

Another source of danger is from broken or leaky underground drains. Most houses have underground drains which are made of tiles laid by ignorant workmen, and he had seldom or never found a drain which was not in a defective condition. In Boston he had found many drain-pipes without the proper pitch or flush. Some pitched towards the houses instead of the sewers; others were choked with grease, or there were no sewer connections at all. The plumber sometimes ran the drain over a rock, up and down, or ended it on one side, continuing on the other, or connecting two sections of six-inch pipe by a four-inch pipe. A break or stoppage meant a deadly deposit of sewerage. An important question arose as to the legal responsibility of owners for damages from sickness. The courts had lately decided, that if the landlord is cognizant of sanitary defects, he is liable for resulting injuries. Nothing but iron pipes with lead joints properly coupled, and carried along the cellars in sight, or in trenches easily accessible, should be used.

Another source of danger was from the enormous quantity of made land in cities. The New York Board of Health states that ten years are necessary to thoroughly purify made land.

Down to a very late date, many of the sewers of New York were constructed of inferior material and imperfectly laid. Badly-burned bricks, bogus cement, and sand that was half loam, were used in making them, while many times the contractors who laid them executed their work in the cheapest and most culpable manner. Few of the best sewers were really tight, while the majority leaked at every joint, and thus the whole system was an enormous source of soil pollution. From the lack of a comprehensive plan in the beginning, and of competent supervision during their construction, many of the sewers had little, or not enough, grade, and were not easily flushed. Hence, they become (especially when tide-locked) elongated cesspools and mere gasometers for creating evil. Their lack of ventilation leaves small chance for the sewer-gases to find vent, excepting through the house-drains, and the average plumbing affords no barrier against their free diffusion throughout living- and sleeping-rooms. And here it should be remarked, that sewer-gas is created not only in the sewers alone, but every inch of waste-pipe in a house, even though used to convey nothing but soapy water, or the waste of melted ice from a refrigerator, can and commonly does produce foul gases. The worst odors are from just such sources, and they are certainly unwholesome. There are many broken gas-mains. The soil can hardly be dug up without encountering the smell of gas. The gas companies are aware of this loss, and make it up in their bills. Prof. Chandler says that ninety per cent. of the cellars in New York are bad, and the speaker would say that ninety-five per cent. are either originally dangerous or made so by neglect.

There were several sources of foul air in houses. The air supplied to the furnace is often taken from the cellar, or the cold air-boxes are made of unseasoned wood, and in them rats, cats, and chickens seek shelter. In one house two chickens and a cat were found roasted in the brick work near the furnace. The refrigerator should have no connection with the drains as they are built in most houses, nor should the refrigerator waste run into the soil. Garbage and dust from wet and coal in cellars cause foul air, which is drawn up into the living-rooms by the suction of hot air, if not through the dumb-waiters. It is desirable to have the kitchen and laundry separate from the house. The servants' accommodations should be carefully looked to; for if they have poor rooms and no bathing accommodations, they are naturally careless in their household duties. Servants should not sleep on the ground floor, especially near closets. Hard floors are an improvement; but there is too much upholstery in houses, and there should be fewer curtains, which retain the dust. The plumbing ought to be isolated as far as possible, and the New York Board of Health recommends a shaft for the purpose, running through the house. It is bad to have inside bath-rooms opening into sleeping-rooms. There must be an ample water supply, and he was glad that Ericsson's caloric engine is being used to pump water. There was special danger in sleeping in rooms opening into closets. Most soil-pipes were too large, and hence only partially filled by water. Dangers from sewer-gas are largely due to job-building, the employment of poor, cheap plumbers, and the ignorance of architects.

Prof. DOREMUS said that at the request of the President he had the honor to perform a few experiments, which would demonstrate how readily gas passes through porous media. He had been instructed in this by that distinguished man, the late Prof. John W. Draper, about forty years ago. In 1867, at his last interview with Prof. Liebig, that gentleman had said to him, "Don't leave Munich without visiting Voit and Pettenkofer's laboratory," and he saw there what he proceeded to demonstrate.

On the table was a block of brown sandstone, twelve by fifteen inches long, and four and three-fourths in thickness. On each side of this, a depression, a quarter of an inch in depth, had been made. Iron plates had been inserted in them, and attached by clamps. To each iron plate an iron tube was fixed. The whole surface of the stone, except that covered by the iron, had been coated with many layers of varnish. Prof. Doremus, by means of a flexible tube, connected the gas-pipe with the iron tube attached to the iron plate upon one side of the stone. After waiting a minute or two, he applied a lighted taper to the end of the other tube connecting with the sandstone on the other side, and a small flame sprang up, showing that the gas had passed through the solid stone. Prof. Doremus then took a block of brick-work, eight inches in thickness, made of Philadelphia brick, with plates and tubes attached in the same manner as to the sandstone. By blowing through one of the tubes, a candle-light, placed

at the end of the other, was deflected; and this deflection lasted for some time after the blowing had ceased, showing that it took some time for the air to go through the brick. Blowing still harder, the light was extinguished. Prof. Doremus added, that hydrogen or street-gas could be passed through stone in the same way, and that the pressure necessary to accomplish it was very small.

The next experiment was for the purpose of demonstrating the permeability of porous substances by gas, and the fourth experiment illustrated the fact that gas will pass through porous substances, notwithstanding it is opposed by the pressure of a whole atmosphere. What had been proven to be true of the gases used in the above experiments was true of sewer-gas and illuminating-gas. What steps, then, must be taken to protect ourselves from their evil influence? Water traps were inefficacious, for the gases would pass through the water and out into our houses. The only way was to kneel at the shrine of chemistry, and to make use of such substances as would decompose these poisonous gases. At Bellevue Hospital permanganate of potassium had been used for this purpose; Labarraque's solution, or the chloride of zinc, could also be used. Exposing the water and gas in our sewers to such agents destroyed all poisonous germs. Every emanation from our bodies, with few exceptions, is a compound of hydrogen, and there is not one of them that cannot be destroyed by chlorine, bromine, or some such substance.

Suppose a case of scarlet fever occurring and resulting in the impregnation of the walls of the house with the poison. Bromine or chlorine, both of which readily volatilize, may be used to destroy the poisonous germs. In 1865, the ship "Atlanta" arrived in New York with a number of cholera patients on board. Sixty of her passengers had already died. The "Atlanta" and all other vessels entering the Narrows were treated with chlorine, bromine, and other similar agents, and with the result of stamping out the disease entirely.

Dr. Agnew had informed the speaker that about thirty years ago the north wing of the old New York Hospital became so foul from the reception of a large number of ship-fever patients as to be unfit for use. Ventilation was tried, but in vain. Three workmen, engaged in scraping the walls, sickened and died. At the Lincoln County Hospital, England, the walls became magazines of disease in the same way. They were gutted and replastered, but doing no good, they were torn down to the very foundation. Some years ago certain surgical wards in Bellevue Hospital became so infected that many patients died of pyæmia. At the request of the Commissioners of Charity and Correction, Prof. Doremus attempted to purify them by the use of chlorine gas. The enormous amount of three tons of this gas was generated in these wards, and though many weeks were necessary for its accomplishment, the result was very satisfactory. Dr. James R. Wood had stated that since then no cases of pyæmia had occurred. Every few months now the chlorine treatment, though in a less rigorous form, is resorted to. He thought he was warranted in saying that, owing to the porous character of all walls and the decomposing power of certain gases, we can purify the most stately edifice if we would adopt the heroic chemical treatment.

Prof. Doremus said he spoke upon this occasion with a good deal of feeling and earnestness. On the first of last December he was to have delivered a lecture, illustrated by experiments, in which his son, fourteen years old, was to have assisted. The day before that son died from the evil effects of sewer-gas. Another son was just now recovering from the effects of an illness due to the same cause. He would have rather given his son the deadliest poison in his laboratory, and have trusted to the antidotes, than to have had him inhale this sewer-gas, for the deadly effects of which we have no remedy.

Dr. WILLARD PARKER said we had all known, he thought, of the fearful destruction of life in the wards of certain hospitals after they had become old and the walls saturated with disease. We had supposed fumigation and white-washing would remove the cause of disease, but had now been informed that this kind of treatment was of little or no avail. He would never forget the condition of things in Bellevue Hospital in 1846, when its wards contained so many patients with ship fever. He had never seen any disease which he really dreaded except ship fever. At the time referred to the wards were filled to their utmost, and Dr. Riess was house physician. Going through the wards in the morning they would pick up a dozen or more that had died during the night. It was supposed that the patients were crowded too much. Beds were laid upon the floor, but the death-rate continued very large. The subject then came up before the Medical Board, and it was decided that, as no more patients could be accommodated in the wards of the hospital, tents should be erected in the yard under the trees. The result was that nearly all the patients placed in tents recovered.

Many of those present may remember the vessel "Phœbe," which was driven upon the shore at Perth Amboy in 1847. Many patients with typhus fever were on board. A large number of deaths had already occurred; but when the ship went ashore and the patients were taken out and placed upon the ground, under the trees, and in hastily improvised canvas tents, or stalls, not one of the eighty-four thus placed died. These instances only showed the great importance of having the right kind of air to breathe.

Previous to the introduction of Croton water into New York in 1846, he did not remember of having seen a case of diphtheria. We had cases of croup, or membranous croup, as it was then called. Occasionally we met with a case of sore throat which was diphtheritic in character, the tonsils being enlarged and covered with a little whitish membrane. Diphtheria was the result of sewer malaria. There were none of us who had been in practice many years but could recall instances where the disease had occurred in families and swept away several members, and apparently without any cause. "Suppose, sir, Mr. President," the speaker asked, "there was a vault containing dead bodies near your house, would you be willing to have a tube connecting your bed-room with it?" Yet this is practically what we do with our sewers. I say, sir, that whenever diphtheria occurs there is something wrong with sewerage. Now, if I were going to build a house, I would not have it connected in any way with the sewer. I would have old-fashioned bowls and pitchers upon my washstands. Back of the house I would have constructed a sort of annex, where I should have all the sewers, closets, and all the pipes of the house. This matter demands our most earnest attention. New York, in this respect, is in a very critical and unhealthy condition, and the time has arrived for energetic action.

The PRESIDENT then referred to the presence of two physicians who had been members of the Board of Health, and said he would call upon them in the order of their seniority.

Dr. VANDERPOEL, one of the Honorary Fellows of the Academy, remarked that one thing was certain, the time had now come when physicians should know not only the principles of their profession, and two or three of the natural sciences, but they must know the elements of plumbing, and the sanitary construction of houses, so as to point out their defects, as it was impossible to trust mere mechanics. One defect not

pointed out in the paper of the evening is, that there is no soil drainage proper in New York. Though there are sewers connecting with every house, there is no chance for the moisture of the soil to escape. Phthisis has been shown here and in England to be induced by this character of the soil. In England the use of a proper system of drainage has reduced the disease. There is much filled soil here, and no provision has been made for the release of the water contained in it. While it was desirable to have soil-pipes exposed to view, it was practically impossible, as they would disfigure elegant dwellings, and in small houses space was too valuable. All joints of pipes should be carefully caulked with tow, lead, and sulphur. But when the pipe is set in a slit in the wall, the caulker could reach only half way round it, and the rest of the distance about the joint was untouched. The sanitary engineer was assuming an important place in the professions, and every house should be inspected.

Dr. JANEWAY said it was hard to distinguish between sickness from sewer-gas and sickness due to disease-germs entering sewer-pipes. Small-pox may come from germs in the sewer, but no one would attribute it to sewer-gas. Excluding diphtheria, he thought all would agree that contagious diseases did not arise from sewer-gas.

The portability of the germs of diphtheritic disease was much greater than was generally supposed. He knew of a case very recently where a child was taken sick with diphtheria in the country. Its clothes were brought home, and three members of the family sickened of diphtheria. We should correct the defects in our sewers, but we should not lose sight of a more important point, the portability of contagious germs. In his own practice it had occurred that diphtheritic germs were carried from Brooklyn to Florida in a trunk. Another point not to be lost sight of, is the possibility that much of the typhoid fever does not come from breathing sewer-gas, but from drinking water containing the germs of the disease, which have been drawn up into the water-pipes, and in that way get into the alimentary canal. In a case under his observation, several children were sick in a large house. He turned the water on below, and then turning it on above, the air was sucked into the pipes below. These faucets were over some drain-pipes connecting with closets, where diphtheritic stools had been deposited, and the water above, which was subsequently drunk, was thus tainted. This occurs also where there is no trap, or where there is no direct communication with the sewer. Dr. Janeway closed by explaining some tests with the chlorate of lithium.

Dr. PETERS was called upon by the Chair, and spoke of the large amount of sickness caused by foul docks. He recommended the carrying of sewer-pipes out to the end of docks.

The PRESIDENT then presented the prospectus of a plan for instructing the general public, policemen, firemen, etc., in the general principles of nursing.

Dr. AUSTIN FLINT, Sr., proposed resolutions approving the plan, which were adopted.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, February 2, 1882.

E. L. DUER, M.D., PRESIDENT, IN THE CHAIR.

Sponge-Tents.—Dr. ALBERT H. SMITH said it is not necessary to dilate upon the necessity of mechanical dilators for the neck of the uterus, both as a means of diagnosis and as an important therapeutic measure. The original sponge-tents were made from a flat piece of sponge, saturated with wax, and pressed flat between pieces of marble. This form of tent is comparatively useless, as it expands in one direction only. The first suggestion of the present form was, I think, by Dr. Sims in his work on *Uterine Surgery*. His method consisted in immersing a conical piece of sponge in a strong mucilage of gum-arabic, impaling it upon a wire skewer, and winding it tightly with a cord, after which it was hung up to dry, when the cord and skewer were withdrawn, and the tent smoothed with sandpaper. If the cord was wound on the sponge with sufficient tightness to give the tent useful expanding power, great difficulty was experienced in withdrawing the stylet. I was led to make a few changes in the method, and now employ a cylindrical piece of sponge, which is saturated with water only, and, without any stylet, is wound with a piece of fishing-line, to which a six-pound weight is attached; this compresses it thoroughly, and its form is easily given by the fingers during the process of rolling. The surface should be made as smooth as possible by means of sandpaper. The tent should be of uniform size from end to end. If it is conical, the tent is introduced as far as possible, but only the small part, without much dilating power, enters the internal os, and it is not unfrequently withdrawn unexpanded, while the external os and the cavity of the cervix are widely dilated. The sponge selected should be strong and fine. I have seen tents made from coarse, rotten material, which would break during the extraction, leaving portions within the cavity of the uterus.

The introduction of medicating materials into an internal cavity of the tent is objectionable, as they usually corrode the sponge, and the space and loose winding necessary to allow the removal of the stylet reduce materially the dilating power. The curved shape is useless, as the uterus can be straightened before the insertion of the tent, and less force is needed for the insertion of a straight one.

To prepare the uterus for the introduction of a tent, first use a dilator of soft metal, or a graduated wax bougie, to straighten the cervix and measure the length and calibre of the uterine cavity, noting tortuosities, etc.; then rapidly introduce the largest tent possible, having first coated it with an enamelling material—as soap—and immersed it in a box of salicylic acid in fine powder, which is to be rubbed in thoroughly to form an antiseptic paste over the tent. A sponge-tent thus prepared may be allowed to remain in situ for forty-eight hours without developing any unpleasant odor, unless there is breaking-down tissue, which may overpower the disinfecting powers of the acid. For ease in inserting, I have had constructed a peculiar, powerful forceps to hold the tent, which is clamped tightly, and enables the operator to pass it rapidly to its position. Hot-water injections after the tent is in position will expand the sponge rapidly, and fix it in about a minute. If pain follows the insertion, it can be controlled by opium suppositories.

If the tent is removed at the end of twenty-four hours, it will cause hæmorrhage, because the spongioles have buried themselves into the cervical tissues, which grasp it tightly, and a forcible extraction will drag away portions of the uterine tissue, and leave a raw and absorbing surface. But at the end of forty-eight hours the tent comes away easily without any bleeding. The contractile power of the uterus still remains at the end of twenty-four hours, and the presence of a finger or application in the cavity of the uterus causes rapid contraction. At the end of forty-eight hours the uterus is paralyzed, all pain has ceased, and local irritability is less. When the tent is removed, wash out the cavity of the uterus with tepid, salicylated water, and, if necessary, introduce a second tent.

Among the advantages of the sponge-tent are its slowness of dilatation—not slowness of expansibility. The power of the laminaria-tent is greater as a dilator,

but it will slip from the uterus as soon as it has ceased expanding, while the sponge-tent will remain as long as it is wanted. The sponge has also a disintegrating power over morbid surfaces. The healthy tissue will contract again, but diseased structures will not contract, but will slough off, their vitality being destroyed. The sponge being porous, discharges will pass through it.

The usefulness of the sponge-tent is for both exploratory and therapeutic purposes. It causes less pain than the laminaria-tent, and after its removal there is less tendency to contraction, and it is, therefore, more satisfactory for exploratory preparation. The sponge has a stimulant effect on the uterine parenchyma, and in cases of chronic metritis and hyperplastic enlargement it will cause a reduction of bulk. In one case, after the prolonged use of internal applications of iodine, nitric acid, etc., the repeated use of sponge-tents resulted in a complete restoration of the uterus to the natural size. In cases of stenosis the laminaria-tent may be preferable, and I prefer it to cutting operations or the use of powerful steel dilators. In one case, years ago, I introduced a sponge-tent in my office, and allowed the woman to walk home, and keep about her daily duties. The menstrual flow came on two days later entirely without pain, for the first time in the patient's experience; the flow escaped through the sponge and the latter was then removed. Conception occurred before the next menstrual period. The sponge-tent is also the safest agent for the destruction of granular growths of the endometrium. A patient had been bleeding profusely at every period for three years; supposing a polypus to be the cause, a sponge-tent was introduced to secure dilatation; a finger was introduced into the uterus, but finding no polypus, more tents were passed to the fundus, and fungoid growths of the endometrium were broken up by the tents. I was disappointed in my expectations of finding and removing the supposed cause of the hæmorrhages, but was agreeably surprised to find the patient remain well after the uterus contracted. Another patient was sent to me from Boston, for diagnosis only. I obtained permission to use a tent for exploratory purposes. I dilated the uterus with the largest sponge-tent passed to the fundus, introduced my finger and found fungosities on the anterior wall, but the means intended for exploration resulted in a cure.

In a case of polypoid pedicellated growths, I at once dilated with sponge-tents after the use of the wax bougie. The finger found a pedicellated growth as large as a hen's egg, but the tent had disintegrated it, and it could be removed by the finger without instrumental aid.

(To be continued.)

CORRESPONDENCE.

ABORTIVE TREATMENT OF FELON WITH COPAL VARNISH.

To the Editor of THE MEDICAL NEWS:

THE MEDICAL NEWS of January 28 contains an article upon "The Abortive Treatment of Felon with Copal Varnish," by A. B. Isham, M.D., of Cincinnati, O., in which the writer attributes the abortive influence to turpentine and pressure. As confirmatory of the views there expressed, I will state that the negroes of the pineland region of South Carolina very commonly treat whitlows with the "dip" taken from the box in which the crude turpentine, or gum, is collected, containing the rosin and turpentine in a state of union. They are separated by "stilling," or distillation. The affected finger is smeared with the "dip" taken from the tree-box, and wrapped up closely in a piece of cotton or linen cloth. A domestic remedy, used by the whites, is to dip the finger threatened with felon in boiling turpentine, the turpentine boiling at a much lower temperature than water. Both of these methods are fairly successful, but neither are specifics. Another domestic remedy is dipping the finger in water as hot as can be borne. I suppose both of these hot applications are efficacious from the well-known astringent action upon the capillaries that hot fluids exercise. The writer, I presume, is familiar with the practice of applying lunar caustic over the skin of the affected finger, although he does not mention it. This will occasionally prove abortive. I presume all of these remedies, although widely different in character, act somewhat in the same way, abating inflammatory action by their constrictive action on the capillaries of the part.

Yours very truly,

BENJAMIN RHETT, M.D.

SUMMERVILLE, S. C., Feb. 1, 1882.

NEWS ITEMS.

BROOKLYN.

(From our Special Correspondent.)

AMONG the changes in the departments incident to the new *régime*, we note that Dr. Jas. Crane has been succeeded by Dr. Jos. H. Raymond as the Commissioner of Health.

Steps are being taken to organize a night medical service under a law passed in 1881. Five thousand dollars will be set aside for that purpose when the Board of Apportionment meets.

CANADA.

(From our Special Correspondent.)

CANADIAN VETERINARY COLLEGES.—The attendance at the Toronto and Montreal schools this season is large, over one hunded students at the former and about fifty at the latter. In both the majority of the students are Americans, even the most distant States, as Texas, sending representatives. The Montreal school is affiliated with the medical faculty of McGill University, and the pupils take botany, chemistry, and physiology with the medical students. The course extends over three years, six months' session, with matriculation, primary, and final examinations.

HOW TO GET RID OF A PROFESSOR.—The difficult question of how to get rid of an unpopular or inefficient professor was recently solved in a Nova Scotian college by the students "striking" in a body, and refusing to attend his lectures.

MEMORIAL TO DR. ROLPH.—It is proposed to erect a memorial to the memory of the Hon. Dr. Rolph, who for many years was a prominent medical man and politician in Ontario. He founded the Victoria Medical School in Toronto, better known as Rolph's School, which did not long survive his death, in 1869.

EFFECTS OF FEEDING A CALF WITH TÆNIA.—In connection with the course of lectures on helminthology at the Montreal Veterinary College, the interesting experiment was recently made of feeding a calf with ripe segments of tænia saguiata. The animal became ill, and when killed, seven weeks later, there was well-marked cestode tuberculosis, the muscles swarming with the larvæ or cysticerci.

HEALTH IN MICHIGAN.—For the week ending Feb. 4, 1882, the reports of the Michigan State Board of Health indicate that influenza, scarlet fever, and ton-

sillitis have considerably increased, and that rheumatism and pneumonia have considerably decreased in area of prevalence.

Reports have been received showing small-pox present during the week ending Feb. 4, and since, at thirteen places in Michigan, as follows: On a vessel at St. Joseph, Berrien Co. (1 case), Feb. 2; in Park Township, St. Joseph Co., Feb. 2; in Spalding, Menominee Co. (14 new cases), Feb. 3; in Elkland Township, Tuscola Co. (1 case), Feb. 3; at Kalamazoo, Grand Rapids, Saginaw City, Detroit (2 new cases), and Marshall (1 case), Feb. 4; in Port Huron Township (8 cases), Feb. 5; in White Cloud, Newaygo Co. (3 cases), near Menominee (1 case), Feb. 6; in Kimball Township, St. Clair Co. (4 cases), Feb. 7, 1882.

Other contagious diseases are reported at places too numerous to mention; scarlet fever at twelve places, diphtheria by twenty observers, at eighteen places.

FIRES IN THEATRES.—In the *Revue Scientifique*, January 7, 1882, there is an interesting historical and statistical review of the different disasters which have occurred in places of amusement from fire. At its conclusion, the author alludes to the experiments of M. Monnier, on the chemistry and physics of the gases produced in combustion, and gives the recommendations of M. Karl Vogt, based on these studies, as to the means by which suffocation can be best avoided under such circumstances. These are: 1. The replacing of the drop-curtain by a metallic screen, which will completely shut off the auditorium from the stage, and which must be capable of being placed in position with the greatest ease and despatch; and 2. The placing in the ceiling of the stage, and above the chandelier, of a large ventilator, which can be readily opened, and by which the deleterious gases, greatly expanded by the heat, may be allowed to escape, and access to the firemen thereby rendered safe.

The *Lancet*, January 7, in a short article on the "Anatomy of Panic," recommends that "the managers and chief performers should make it a point of honor to keep *their* self-possession, and preserve smiling faces above the footlights if any hitch occurs."

In addition to these, it would be well if the public were accustomed to the use of all the means of exit, and all exit doors should only be fastened on the inside, and by bolts which can be readily slipped. All passages to exit doors should be so labelled, and the law should require them to be kept unobstructed.

INTERNATIONAL HYGIENIC CONGRESS.—The fourth annual session of the International Hygienic Congress will be held at Geneva, Switzerland, from the 4th to the 9th of September, 1882. An exposition of publications, plans, designs, and objects of all characters relating to hygiene, will be held in Geneva from the 1st to the 30th of September.

SURGEON-GENERAL BARNES.—A press despatch from Washington states that Surgeon-General Barnes is not to be retired for the present, owing to the fact that a bill is pending in Congress to provide for his retirement with the advanced rank of Major-General, in recognition of his services in connection with the illness of President Garfield. It is eminently proper that such recognition should be made, and its fitness has already been urged in these columns.

THE ILLUSTRATED QUARTERLY OF MEDICINE AND SURGERY.—The prospectus of the new journal, whose début we announced a fortnight ago, is issued. Each number will consist of four quarto plates, with twenty-four pages of text. It will only contain original matter, and will be under the able editorial management of Drs. George Henry Fox and Frederic R. Sturgis, which should assure to it the success which we trust it may attain.

SMALL-POX.—The returns for the week ending February 11 show a mortality in New York of 21; in Philadelphia, of 15; Pittsburgh, of 27; Boston, of 1; Titusville, Pa., of 1; Cincinnati, of 25; Chicago, of 20.

PARIS FACULTY.—Prof. HAYEM has been transferred from the Chair of Therapeutics to that of Pathological Anatomy, vacant by the nomination of M. Charcot to the new Chair of Nervous Disease.

UNIVERSITY OF THE CITY OF NEW YORK.—Dr. Wm. C. Jarvis has been appointed Lecturer on Laryngology, vice Prof. J. Elsberg, M.D., resigned.

PERSONAL.—The busts of Dupuytren and Baron Larrey have just been placed in the gallery of the French Institute.

OBITUARY.

SIR ROBERT CHRISTISON, BART.

THIS illustrious physician and toxicologist died on the morning of the 27th of January, at his residence in Edinburgh. He attained the unusual age of eighty-five years, having been born in 1797. If we except the severe illness which led to his retirement from active life in 1877, and from which he afterwards almost completely recovered, he enjoyed comparatively good health until a month ago, when he was laid up with a severe catarrh, from which he never rallied. He was the son of Prof. Christison, who for some years occupied the Chair of Humanity in the University of Edinburgh.

He commenced his university studies in the year 1811, passing through both the arts and medical curriculum. Graduating after eight years, and having had the advantage of being for two and a half years resident physician at the Royal Infirmary in his native city, Dr. Christison proceeded to London and Paris. At the latter place he studied under M. Orfila, the celebrated toxicologist, and soon became a specialist in that department of medical science.

Shortly after his return to Edinburgh, and at the early age of twenty-five, he was appointed to succeed Alison as Professor of Medical Jurisprudence in his *Alma Mater*, in which position he remained for ten years. During this period he published his widely-known *Treatise on Poisons*, a toxicological work which for completeness, scientific accuracy, and philosophic spirit has never been equalled in any language. Although it is now more than fifty years since its first publication, it still remains the standard work on the poisons of which it treats.

On the death of Duncan, in 1832, Dr. Christison was transferred to the Chair of Materia Medica, which position he occupied until 1877, when failing health compelled him to resign, his successor being his former assistant, and the well-known pharmacologist, Dr. Thomas R. Fraser.

Prof. Christison's lectures formed for many years one of the chief attractions of the Edinburgh Medical School; and this is no meagre praise when it is remembered that among his colleagues were such world-famed surgeons and physicians as Syme, Simpson, and Gregory. His popularity as a lecturer continued to the end, and none were more venerated and loved by his pupils, who are now to be met with in every part of the globe, than Sir Robert Christison. Exact in his information, lucid in exposition, lively and almost playful in manner, occasionally illustrating his subject with an appropriate anecdote, most generous and sympa-

thetic in his relations to his students, his lectures were listened to with genuine pleasure and appreciation.

In his extra-academical life he was no less fortunate. He was for many years the most popular consulting physician in Scotland; and he was appointed physician in ordinary to the Queen for Scotland. His services as a toxicological expert were in much request throughout Britain, and in this capacity his name is associated with all the notable poisoning cases of the last half century.

Besides the *Treatise on Poisons*, to which we have already alluded, he wrote the article "Poison" for the seventh edition of the *Encyclopædia Britannica*, and the article "Orfila" for the eighth edition; not to speak of numerous papers, elsewhere published, on the toxicological effects of arsenic, opium, and other drugs. He has also rendered valuable service to the profession in connection with the last edition of the *Edinburgh Pharmacopœia*, merged, since 1864, like those of London and Dublin, in the *Pharmacopœia Britannica*, prepared under the auspices of the General Medical Council. In his *Dispensatory*, published in 1842, he presented a commentary on the then existing pharmacopœias, characterized, like his book on poisons, by precision in detail, and by the concise, yet happy, expression of suggestive generalizations. He has also contributed some valuable clinical and pathological memoirs. His work on the *Granular Degeneration of the Kidneys*, written in 1838, is still held in high estimation.

Another form of disease to which he devoted special attention was that of fever, in its numerous and perplexing varieties. In this case he was able to speak from personal experience, for, owing to a peculiarity of constitution, he was liable to suffer frequently from tolerably severe febrile attacks. He gave the results of a long clinical experience in a paper on the "Changes which have taken place in the constitution of Fevers and Inflammations in Edinburgh during the last forty years." He held that fever had changed from sthenic to an asthenic type, and that, whereas venesection was at one time servicable, it was now injurious. It was not a mere change in the manner of our therapeutics.

Dr. Christison also did much to improve and cheapen the dietary of Scotch prisons, and other public institutions, by his elaborate investigations in the effects on the health of the prisoners of various forms and combinations of food.

Throughout his long and brilliant career he received many public tokens of the esteem in which he was held by all. In 1866, the University of Oxford bestowed on him the highly honorary degree of D.C.L., and, in 1872, his own University made him, while yet a professor within its walls, an LL.D., an honor without precedent in its annals. He was twice elected President of the Royal College of Physicians of Edinburgh, and he was for some time President of the Edinburgh Royal Society. He was offered the Presidency of the British Medical Association in 1875, but he was obliged to decline the honor on account of infirm health. In 1871 he was made a baronet by the Queen, in recognition of his position as premier physician of Scotland. He was professor for the very long period of fifty-four years, a length of service unequalled in the records of the University since its foundation.

In 1872 the jubilee of his professorship was celebrated with great *éclat*. The University Volunteer Company, of which he was captain, presented him with a sword of honor; the Edinburgh University Club, of London, which is presided over by the Duke of Argyle, sent him a congratulatory address, and a banquet was given in his honor, at which were present many of the most eminent literary and scientific men in the kingdom.

In person he was tall and broadly, though not stately, built; even to the last he walked remarkably erect, and the litheness of his step often excited astonishment. Only a few months before his death he had ascended one of the highest of the Scottish hills, Ben Nevis, and this was no uncommon feat during the last decade of his life. The baronetcy falls to his eldest son, Alexander Christison, who is Deputy Surgeon-General of the Bengal army and Principal of the Agra Medical School.

NOTES AND QUERIES.

THE POTASH THEORY OF URÆMIA.

To the Editor of THE MEDICAL NEWS:

SIR: In glancing over your issue of January 7, I noticed a clipping from the *Bull. Gen. de Therap.*, of September 15, 1881, on a new theory of uræmia by MM. Feltz and Ritter, saying that a "certain quantity of the salts of potassium contained in the blood influenced in a certain degree the amount of urea necessary to produce grave or fatal results." I do not know whether I would have paid any special attention to the paragraph had it not been for the following circumstances: During the prevalence of scarlatina in our village I was over-solicitous for the welfare of my youngest daughter, a bright little thing of four years, she having at the time an *infantile eruption* of the lower extremities. I gave her three times a day chlo- and iodide of potash regularly, in order to relieve her of the sores, but more especially to charge her system with potash to lessen the severity of the attack of scarlet fever, as I supposed. Now she was the *only case in the village that died of uræmic poison*, and, in fact, the only one who succumbed to the disease in thirty or forty cases. I just give you this one instance; whether there was anything in it, or only a coincidence, I cannot say.

Very respectfully yours,

L. M. SENCINDIVER, M.D.

DARKESVILLE, W. V., January 25, 1882.

[Our correspondent's case is a striking clinical confirmation of the potash-salts theory of uræmia. Since the publication of Feltz and Ritter's experiments, Astaschewsky, of St. Petersburg, has announced that he had arrived at the same conclusion. He found no effect from the injection into the blood of urea, or creatinin, but the mineral constituents of the urine caused uræmia. When the potash salts were removed from them, no effect was produced. It seems to be established, therefore, that the retention of the potash salts is the cause of uræmia. The practical applications of this fact are obvious.—ED.]

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 7, TO FEBRUARY 13, 1882.

CAMPBELL, JOHN, *Lieutenant Colonel and Surgeon.*—Medical Director Department of the South. Granted leave of absence for fifteen days from 13th inst.—*S. O. 17, Department of the South, February 11, 1882.*

GARDNER, WM. H., *Captain and Assistant Surgeon.*—Assigned to duty as Post Surgeon at Fort Concho, Texas.—*S. O. 13, Department of Texas, February 6, 1882.*

TREMAINE, W. S., *Captain and Assistant Surgeon.*—Who reported at these headquarters January 9, 1882, per par. 12, S. O. C. S., A. G. O., will await further orders in New York City, from date of his so reporting.—*S. O. 20, Department of the East, February 7, 1882.*

BARTHOLF, JOHN H., *Captain and Assistant Surgeon.*—Fort Lapwai, Idaho. Granted leave of absence for fifteen days.—*S. O. 12, Department of the Columbia, January 25, 1882.*

WOOD, M. W., *Captain and Assistant Surgeon.*—The seven days' leave granted him on 4th inst. by Post Commander Fort Brady, Mich., is extended twenty-three days.—*S. O. 19, Department of the East, February 6, 1882.*

COMEGYS, E. T., *Captain and Assistant Surgeon.*—To be relieved from temporary duty at Columbus Barracks, Ohio, on receipt of order, and to report in person to Commanding General Department of the Missouri for assignment to duty.—*S. O. 32, A. G. O. February 9, 1882.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XL. SATURDAY, FEBRUARY 25, 1882. No. 8.

ORIGINAL LECTURES.

ON PRIAPISM ACCOMPANYING INJURIES OF THE SPINE.

An Abstract of a Clinical Lecture Delivered at the Pennsylvania Hospital, February 11, 1882.

BY WILLIAM HUNT, M.D.,
SURGEON TO THE HOSPITAL.

GENTLEMEN: In the *Medical News and Abstract* for November, 1881, I discussed in a lecture on Injuries of the Spine, the symptom of priapism which sometimes exists after those injuries, and which, when it does occur, is a sure index of what has happened, and mostly is of very serious import. I also called attention to the fact that it may exist after injuries anywhere along the column, and that I could confirm this from my own clinical experience. I then showed that the explanation is not to be sought for on the theory of centres somewhere in the cerebro-spinal axis, but that the phenomenon is due to disturbance of the vaso-motor nerves, through the direct involvement of the sympathetic and its ganglia in the injury. I also called attention to the fact that in normal erection the intensity of sexual passion, or local irritation overcomes the inhibitory function of the sympathetic system, and that this function is also overcome when the sympathetic is lacerated, irritated, or divided at the same time that the cord is injured, in the latter case erection occurring without sensation, and being more or less persistent according to the severity of the injury.

"Thus," I say, "it is not necessary to trouble one's self about a special nerve-centre ruling over the function we are considering. Thus also this symptom in accidents to the column and cord is explained; also why some have it and others do not, why it is evanescent in some and in others almost constant, why it may appear in injuries occurring anywhere along the spine, why there is no sensation when it occurs as an accompaniment of laceration or pressure on the cord, for communication with the brain is cut off, and why, also, it is rare to find it in disease of the membranes or cord.

"When the wounding missile or crushing force breaks the spine and involves the cord, and there is accompanying priapism, then the neighboring ganglia or nerves of the sympathetic are bruised or wounded at the same time, from being caught in the line of the crush or wounding missile. When this symptom does not occur, the sympathetic has escaped. I have no doubt that when it occurs in hanging, the superior cervical ganglia of the nerve are caught in the squeeze. In most cases of disease the lesion is within the canal, and the sympathetic fibres or ganglia are not involved."

This explanation has not been accepted by some of my physiological friends as entirely satisfactory, but their views are based mostly upon theoretical grounds.

A most interesting case has just come under my care, and appears to me to give great force to the views expressed. The following is the clinical history:

Thomas McC——, stevedore, aged fifty, was brought into the Pennsylvania Hospital February 1, 1882, about 10 o'clock, A. M. A short time before, he fell through the hatchway of a vessel upon the shaft alley, a distance of about ten feet below, and struck with great force upon the back of his head and neck. He was a large and splendidly muscular man, with no superfluous fat. He was perfectly conscious, but absolutely paralyzed, both as to sensation and motion, from the line of the second rib downwards. The skin was sensitive over the deltoids, but below this there was no feeling or power of motion in the upper extremity.

He complained of no pain, but had a terrible sense of constriction, and a feeling of want of breath. The breathing was entirely diaphragmatic. The thoracic muscles could not be seen in action anywhere. There was priapism, which, for most of the time, was complete, and always marked. The pupils were contracted and irresponsive to light. Electro-muscular contractility was not impaired. There was scrotal and plantar reflex after recovery from shock; the temperature in the axilla rapidly rose from 97° to 105°, which point it reached on the fourth day, when the patient died. The respirations ranged from 20 on the first day to 32 on the last. On this day they were very labored, as was indicated by the movements of the larynx. The chest was greatly expanded, and there was a deep sulcus across the superior abdominal regions; below this there was meteorism. The pulse-range was from 50 on the first day to 98 on the last, and always feeble. The urine was drawn off with a catheter; it was of 1035 sp. gr., and loaded with phosphates. The surface temperature was, on the second day: Scrotum, 97⅘°; inside thigh, 96°; third day, scrotum and thigh, 96⅘°; fourth day, inside thigh, 98½°. The dyspnœa increased, and the patient became unconscious before death. The diagnosis was based on the symptoms only, for it was not deemed prudent to raise the patient from his bed or to turn him. It was diagnosticated that there was a fracture of the cervical vertebra from the third to the fifth, with laceration of the cord, but not completely involving the phrenic nerves, for by these alone the patient breathed. The opinion was ventured, also, that the cervical portion of the sympathetic nerve was involved in the injury.

Autopsy.—The chest and abdomen were first opened. The lungs were somewhat adherent from old pleurisy, but they were engorged with blood. The right heart was enormously distended. The neck was now carefully dissected. On raising the great vessels, a line of clotted blood from laceration laid along the deep muscles. The superior cervical ganglion of the sympathetic on the right side was carefully sought for above the injury. It was apparently intact, but upon tracing the nerve downwards, it *passed into a line of clot, and the third cervical ganglion was imbedded in a mass of blood, and a firm clot was pressing upon it.* The left side showed, also, blood clot in the same position, but the nerve was not dissected. Dr. Morris Longstreth, who was present and assisted at the autopsy, has carefully preserved the specimen. The clots about the nerve had nothing to do with the lesions of the column and cord which were now sought for.

In fact, the absence of hæmorrhage about the injuries which were here found was a matter noticed by all who were present. There was a complete and clean fracture through the intervertebral substance between the third and fourth cervical vertebræ, involving the bodies of both as though the bones had been subjected to rough grinding. There was also separation between the fourth and fifth and fifth and sixth vertebræ. Directly opposite the main lesions, those of the third and fourth vertebræ, the cord was lacerated and a small hæmorrhage had taken place within it. The patient

appeared to have sustained a tremendous blow with doubling backwards on the line of the main injury, while the other vertebral connections and the surrounding structures were stretched and lacerated.

Dr. Morris Longstreth made some thin sections of the superior cervical ganglion. Hæmorrhage into its substance is very distinct under the microscope. The inferior ganglion was subjected to grosser lesions, for hæmorrhages in and about it are visible to the naked eye. It is the intention of the Doctor to examine and report upon these lesions more fully.

Besides Dr. Longstreth, Dr. John H. Packard, Dr. Jos. M. Fox, the resident physicians of the hospital, and several other medical gentlemen, were present at the autopsy.

In this case do not the enormously distended heart, the engorged lungs, the temperature record, and the priapism, all point to involvement of the vaso-motor system in the injury, and consequent interference with its inhibitory or regulating functions?

The most skilful vivisectionist could not have made a cleaner and more limited break of the spine and laceration of the cord than were done by the accident in this case. There was no pressure on the cord from without by bone fragments or hæmorrhage. The cervical nerves arising above the lesion gave to the phrenics their partial power, and through them and the diaphragm the man lived by actually working for his breath. He *never slept!* Towards the last coma came on rapidly followed by death.

The unimpaired electro-muscular contractility was due, I take it, to the fact of the muscles being perfectly sound in structure and the response was *sui generis* and independent of nerve supply, for in these cases, when the patient lives long enough and the muscles become altered by degenerations, there is little or no response to the electric current. Patellar and ankle reflex were absent, probably because the deep muscular nerves were irresponsive to the rough shock necessary to produce them; while surface reflex through the cord below the lesion was present and is readily understood.

These facts, together with the lesions of the sympathetic nerve and the consequent vaso-motor phenomena, make the case, it appears to me, one of the most interesting and instructive ones on record.

ORIGINAL ARTICLES.

A REPORT OF SOME CASES OF GLAUCOMA

IN WHICH AN IRIDECTOMY ON ONE EYE SEEMED TO PRECIPITATE AN ATTACK OF ACUTE GLAUCOMA IN THE OTHER.

BY C. R. AGNEW, M.D., AND D. WEBSTER, M.D.,
OF NEW YORK.

OUR remarks upon these cases will be brief, as the cases are more interesting and instructive in themselves than anything we can say about them.

That an operation for the relief of acute glaucoma in one eye may quickly be followed by an attack of the same disease in the other, is no new doctrine to the ophthalmic surgeon. Von Graefe, who first performed the operation of iridectomy for the cure of glaucoma, also first observed and described the complication of which we speak. In his experience, the fellow-eye was attacked within fourteen days after the operation on the first in about thirty per cent. of the cases in which the operation was done for primary inflammatory glaucoma. The cases here related will show that it sometimes occurs after an operation for chronic glaucoma, or for painful glaucoma absolutum. In fact, we do not think it safe to operate upon one eye for glaucoma of any kind without previously warning the patient that the second eye may be attacked within a few days, or even a few hours, after the operation. The patient invariably attributes the attack in the second eye to the operation upon the first, and, if not informed beforehand of the possibility of its occurrence, will be very likely to blame the surgeon for withholding his knowledge of such liability.

We think it is now very generally conceded that the attack of acute glaucoma excited in the fellow-eye, in such cases, is not a true sympathetic inflammation. It is believed rather that anxiety of mind, the excitement attendant upon an operation, the hyperæmia of the eyeball, caused by the administration of ether, and the shutting up of the eye with a bandage, are sufficient to awaken an acute attack in an eye already predisposed to glaucoma. And we think it is fair to infer that an eye which has shown no glaucomatous symptoms, subjective or objective, *is predisposed* to the disease if the fellow-eye is so affected.

In the majority of cases where the second eye is so attacked, we have found it necessary to operate upon it with as little delay as possible, and in all these cases we have obtained satisfactory final results. In some cases, however, it will yield to antiphlogistic treatment. We remember a case operated upon at the Manhattan Eye and Ear Hospital, but not reported here, where the attack in the fellow-eye passed off in a day or two, under the use of eserine, and did not return. In the ninth case here reported, the attack in the second eye passed off without an operation, under the use of opiates and iced cloths.

In all our later operations for glaucoma, we have left the fellow-eye unbandaged, and in none of the cases where we pursued this method, have any symptoms of irritation in the second eye shown themselves. We have not followed this method in a sufficient number of cases to base an opinion upon, but we hope to find that the immediate attack upon the second eye will always thus be avoided.

Our *first* case is that of a married woman, forty years old, who came to us with a history of chronic glaucoma, in November, 1872. She had then R. V. $= \frac{20}{30}$, L. V. $= \frac{20}{40}$. Hm. $\frac{1}{36}$ each. T + ? both. Ophth.: Vitreous hazy, retinal veins enlarged and pulsating, disk reddened, retina looking œdematous, and a commencing crescent of staphyloma posticum in both.

She was seen again in February following, when all the symptoms were improved, and she read $\frac{20}{20}$ with each eye with $+\frac{1}{18}$.

On February 20, however, we were sent for, and found the left eye in a condition of acute glaucoma, with sight reduced to perception of light. Ether was at once administered, and a broad, peripheral iridectomy done upwards by Dr. Agnew. On the evening of the next day the fellow-eye was found hard, red, and painful. The pupil was dilated and the vision reduced to perception of light. Iced cloths were applied and anodynes administered, but as the eye was no better the next morning we again gave ether, and Dr. Agnew performed an iridectomy on the second eye. From this time the recovery was good, and some months later the lady read fine print with each eye.

Our *second* case is that of a carpenter and builder, forty-eight years old, who gave the following striking history: About six months before consulting us he went to church one Sunday morning, seeing as well as ever, and was led out by his sister "stone blind." He could see a little by the time he got home. He does not remember having had any pain at the time. Since that time his left eye has become bloodshot and painful, with obscuration of vision about once a month, the vision remaining a little worse after each attack, until *now* it is reduced to perception of light. Eyeball hard, but not red or painful; pupil hazy, not dilated, but sluggish. Ophthalmoscope revealed only a slight reddish reflex from fundus, because of diffuse opacity of the vitreous and translucency of the cornea. R. V. = $\frac{20}{30}$: $\frac{20}{20}$ with + $\frac{1}{12}$.

October 26. Iridectomy by Dr. Agnew on left eye.

The next morning there was a slight dull pain in the right eye. Two days after the operation the right eye was red, pupil dilated, and vision reduced to counting fingers at four feet.

On the third day after the operation on the left eye, an examination having shown that the acute glaucoma in the right was growing worse in spite of treatment, we placed the patient again under ether, and Dr. Agnew performed an iridectomy upon the right eye. The recovery was smooth.

In March, 1875, five months after the operations, R. V. = $\frac{20}{20}$ with + $\frac{1}{18}$ c. ax. 10°, and visual field normal. L. V. = counts fingers in a small field.

Our *third* case is that of a female nurse, sixty-eight years of age, with painful glaucoma absolutum of right eye, and chronic glaucoma of left. L. V = $\frac{20}{60}$; no improvement with glasses. Visual field less than one-fourth its normal size. Tension normal, but glaucomatous excavation of disk.

January 12, 1874. Iridectomy upon right eye, by Dr. Agnew, for relief of pain.

January 14. The fellow-eye has been injected, lachrymose and somewhat painful since the morning following the operation. Anterior chamber shallow, tension increased, vision cloudy. Dr. Agnew now performed an iridectomy on the second eye, and both recovered kindly.

In March, 1878, more than four years after the operations, the patient returned, complaining that the use of the left eye, which had now vision $\frac{20}{20}$, produced pain in the blind right eye, which was then enucleated with entire relief to the patient.

Our *fourth* case is that of a carpenter, forty-eight years old, upon whose left eye iridectomy was performed by Dr. Agnew, for glaucoma simplex, on October 1, 1873. The same night he complained of sharp, shooting pains in the eye operated upon, which were relieved by a hypodermic injection.

On the *third* day after the operation, the *right* eye became red, painful, and lachrymose, and vision was reduced from $\frac{20}{40}$ to counting fingers at two feet. Two leeches were applied to the temple, and atropia and iced cloths used. More or less improvement resulted, and the eye was kept under observation, and treated according to indications until the *eighth* day after the operation on its fellow, when the sight being still reduced to ability to count fingers, it was thought best to perform an iridectomy upon it also, which was accordingly done by Dr. Agnew. Both eyes recovered well after this.

Our *fifth* case was that of a married woman, fifty-two years old, whose father had been blind for fifteen years with glaucoma absolutum. She had a history of chronic glaucoma extending back over several years, and latterly of acute exacerbations in the right eye.

R. V. = $\frac{20}{200}$: no impt. with gl.
L. V. = $\frac{20}{100}$: $\frac{20}{20}$ with + $\frac{1}{24}$.

Ophthalmoscope showed left fundus and media normal; right, dotted and diffuse opacity of the cornea, more dense towards the centre, and shading off towards the periphery. An iridectomy was done upon the right eye by Dr. Webster, June 27, 1877, in the afternoon. The next morning, on removing the bandage, the left eye was found to be slightly injected, the iris bulging forwards, the pupil slightly enlarged and sluggish, and the vision misty; iced cloths were applied.

In the evening, the left eye was found a little worse in every way, and beginning to be painful. Codeia was ordered to relieve the pain.

In the morning of the *second* day after the operation, the eye seemed to be better. In the evening the patient counted fingers with each eye by candle-light, but more distinctly with the operated eye than the other.

The next morning, the *third* after the operation, there was no pain in the eye, but as the sight remained very much blurred, and all the symptoms of acute glaucoma persisted, we made arrangements to operate in the afternoon.

When we went prepared to operate at 4 P.M., we found the lady suffering from the most intense pain in the second eye. This pain had come on suddenly, about an hour before, and the patient described the feeling as that of a sharp knife being constantly thrust around the back of the eyeball. She declared she would rather have the eye taken out than to submit to the excruciating pain an hour longer. Upon separating the lids a large quantity of hot tears burst forth, the eyeball was found intensely congested, and there were many ecchymotic spots in or beneath the ocular conjunctivus.

The cornea was so cloudy that it was with some difficulty that the dilated pupil could be seen; the hardness of the eyeball was very marked, and the vision was only perception of light.

An iridectomy was at once done, under ether, by Dr. Webster. Six weeks after the operations

R. V. = $\frac{20}{30}$ with + $\frac{1}{18}$ c. ax. 180°.
L. V. = $\frac{20}{20}$ with + $\frac{1}{18}$ c. ax. 180°.

She has had no recurrence of the disease, more than four years having elapsed since the iridectomies.

Our *sixth* case is that of a married woman, sixty-three years of age, the subject of goitre, with a history of chronic glaucoma of the left eye, with acute exacerbations.

R. V. = $\frac{20}{60}$: $\frac{20}{20}$ with + $\frac{1}{24}$. Field and ophthalmoscopic appearances normal.

L. V. = $\frac{20}{200}$; no improvement with glasses. Field contracted to a diameter of *one inch* at a distance of *one foot*. Pupil enlarged and fixed; tension +; ciliary veins engorged; shallow anterior chamber.

Ophthalmoscope showed slight diffuse corneal opacity, extensive cupping of disk, with exposure of cribriform fascia.

A drop of a four-grain solution of eserine was put into the left eye, which caused a twitching sensation in and about the eye.

The next day the patient reported that the eserine caused pain for an hour or two, but did not improve the sight, and as we found the condition of the eye the same, we placed her under ether and Dr. Agnew performed an iridectomy upon the eye.

When the eyes were opened on the morning of the *second* day after the operation, neuralgia over the right eye was just commencing. The pain increased in severity, and kept her awake all night, although she took a grain of codeia. In the morning of the *third* day, eyeball red, pupil dilated and fixed, anterior chamber shallow, tension increased, corneal haziness, vision of fingers at three feet.

An iridectomy was done upon the eye, at 2 P.M., by Dr. Agnew, after which the patient slowly recovered. Six weeks later:

R. V. = $\frac{20}{20}$ with + $\frac{1}{20}$c. ax. 180°c. — $\frac{1}{60}$c. ax. 90°.
L. V. = $\frac{20}{100}$; no improvement with glasses.

Our *seventh* case is that of a maiden lady, forty-five years old, who had suffered from weak eyes since measles at fifteen. For five years she had been subject to attacks of neuralgia of the head, occasionally shooting into the right eye. For the last three years the sight of the right had been impaired, but the patient believed she could read with it up to the day before we saw her. She had never tried it separately, however. The eye grew red and painful the day before she consulted us, and she was kept awake all night by the pain. When we first saw her the lids of her right eye were slightly swollen, the eyeball red and watery, the pupil dilated and fixed, the anterior chamber shallow, the tension increased.

R. V. = $\frac{1}{200}$: $\frac{20}{70}$ with + $\frac{1}{10}$; field contracted.
L. V. = $\frac{15}{200}$: $\frac{20}{30}$ with + $\frac{1}{7}$; field normal.

Ophthalmoscope showed in the left eye no lesion; in the right, a diffuse opacity of cornea, which interferes with examination; but a cupped disk, surrounded by a broad whitish ring, can be discerned.

The right eye being very painful, we dropped into it some of a four-grain solution of eserine. An hour and a half later the eye felt much better. The patient was furnished with some of the same solution to drop into the eye twice daily.

Two days later, the patient reported that the eserine so relieved the pain that she had slept well both nights, but the vision was unimproved.

The next day, as the pupil remained dilated and immovable, and the vision unimproved, the patient was placed under ether, and an iridectomy done upon the eye by Dr. Agnew. On the sixteenth day after the operation, it was noted that the eye had steadily improved, and that the sight had risen to $\frac{20}{30}$ with + $\frac{1}{9}$. Seven weeks after the operation, as the fellow-eye was red and irritable, atropia was dropped into it, and adhesions of the papillary border of the iris to the anterior capsule of the lens were discovered. Atropia was then used, *coup sur coup*. Two days later the adhesions had been broken up, and the eye was feeling comfortable. The atropia was stopped.

Ten days later, or at about the end of the ninth week after the operation on the first eye, the patient came to us with well-pronounced acute glaucoma in the other. The first eye was looking well. Ether was now given, and an iridectomy done upon the second eye by Dr. Agnew. Ten days later R. V. = $\frac{20}{30}$ with + $\frac{1}{9}$, L. V. $\frac{20}{70}$ with + $\frac{1}{8}$. The eyes gave no further trouble.

Our *eighth* case is that of a married woman, twenty-six years old, who one evening had pain in her right eye before going to bed. There was also some obscuration of vision, but the next morning the pain had passed off, and the sight seemed as good as ever.

Similar attacks occurred several times, when, becoming alarmed, she consulted an ophthalmic surgeon, who performed an iridectomy upwards upon the affected eye.

Inflammation, with loss of vision, set in on the *second* day, and on the *third* acute glaucoma attacked the fellow-eye. She presented herself at the Manhattan Eye and Ear Hospital one week later, when her condition was as follows:

Right eye red and painful; lens opaque and swollen; no anterior chamber; tension much increased; vision reduced to perception of light. Left eye red and painful; tension increased; very shallow anterior chamber; pupil so widely dilated that only a very narrow rim of iris could be seen, this rim being a little broader below than elsewhere. Opacity of the media prevented the fundus from being seen. Vision of fingers at nine feet.

Ether was given, and, Dr. Agnew operating, a circular disk of the right cornea was removed by means of Bowman's smaller trephine. A portion of the swollen lens matter escaped through the opening.

An iridectomy downwards was done on the left eye at the same sitting, and, in order to keep up the drainage from the eye for a longer period, a small piece of cornea was snipped away with the scissors at one extremity of the wound. Both eyes recovered kindly.

Eleven months later it was noted: Right pupil closed by a dense membrane, perception of light, but very imperfect projection.

L. V. = $\frac{20}{40}$ with + $\frac{1}{42}$s. c. + $\frac{1}{48}$c. ax. 180°. No cupping of optic disk.

The patient was examined two years later and the condition was found unchanged.

Our *ninth* and last case is that of a woman, forty-five years old, who, upon consulting us in September, 1876, stated that she had suffered from very severe pain over her right eye for six weeks. The pain had generally been worse at night, and had grown much worse in the last two weeks.

Eye red, vision of fingers at one foot, pupil widely dilated, anterior chamber shallow, tension increased.

Ophthalmoscope showed only a faint reflex from the fundus. L. V. = $\frac{20}{40}$; sufficient old corneal opacity to account for the lowering of vision.

September 8. Iridectomy upon right eye by Dr. Webster; slight hæmorrhage into pupil. No atropia used.

The next morning the blood had been absorbed from the anterior chamber, which was again filled with aqueous humor. There had been no pain since the operation.

In the evening the fellow-eye became red and watery and slightly painful. The pupil was moderately dilated and sluggish, and the vision was blurred.

An opiate was given, and iced cloths were applied through the night, except during sleep.

The next morning the glaucomatous symptoms had entirely disappeared, and the vision was again $\frac{20}{30}$.

Two years later we saw the patient again. Both eyes had remained well.

R. V. = $\frac{20}{100}$ with — $\frac{1}{24}$.
L. V. = $\frac{20}{30}$: E.

A CONTRIBUTION OF FACTS

BEARING ON THE QUESTION OF THE DETERIORATION OF HUMANIZED VACCINE VIRUS.

BY DANIEL B. D. BEAVER, M.D.,
OF READING, PA.

THE following account of an outbreak of variola is presented as containing facts of general interest to the profession at this time, when so much is being said about the relative merits of humanized and bovine virus.

The circumstances attending the appearance and extension of the disease are unique in many features. It occurred in a rural district (among a class of people whose statements are more reliable than those of the class of persons who find their way into the small-pox hospitals of the large cities), where every inhabitant is personally known to the physician, and consequently every case could be traced to its origin, and when, furthermore, the manner of primary vaccination in nearly every case was known.

The facts were communicated to me by Dr. Thomas T. Zerby, of Sheafferstown, Lebanon Co., where the disease prevailed during the winter and early spring of 1875, and briefly mentioned by me in the report of the Medical Society of Berks County to the Medical Society of Pennsylvania. But since then

additional knowledge of the matter has been furnished, which leads me to record it in this journal.

The disease appeared first in a family living about three miles from Sheafferstown. The manner in which these people contracted the disease could not be discovered. They were attended by one of the village physicians, who during their illness was in the habit of taking a friend, Mr. F., with him on his drives. In the course of some days Mr. F. was taken sick suddenly with fever, delirium, unconsciousness, ecchymoses, etc., and died the second day of his illness. His death was supposed to have been caused by some obscure blood disease, and the corpse was kept the usual time, and during the funeral service taken into the church.

The funeral was largely attended, the number of persons there having been estimated at twelve hundred. Within a week after the burial of this man new cases of small-pox appeared in and around Sheafferstown, and the disease spread rapidly until the number of cases reached two hundred. The infection in every case was traced either to Mr. F.'s sick-room or his funeral, the latter, of course, being the origin of nearly all of them, since the duration of his illness was too short to admit of many persons visiting him.

Prior to his illness and burial there was no case of the disease in the vicinity of Sheafferstown, except in the family above mentioned.

Of the two hundred persons who became affected with the disease, one hundred and ninety-four bore vaccination marks, and six were known not to have been vaccinated. The latter were four small children, and two adults; the children all died, and the adults recovered, making the death-rate 66⅔ per. cent. Of the post-vaccinal cases only five succumbed to the disease, which left the mortality among them at 2½ per. cent.

These cases included persons of all ages, many of whom had not been vaccinated for many years, since revaccination is seldom practised in the rural districts of this section. Even during the prevalence of small-pox, comparatively few persons resort to it. For the primary operation, as well as for revaccination, nothing but the crust of humanized virus has been used for many years. The children are vaccinated during the months of May and June, because at that time of the year physicians have usually least to do, and the children are in better health than during the heat of summer, and exposed less to the changes and inclemency of the weather which give rise to inflammatory affections in fall and winter. It is then necessary for physicians to preserve virus from one spring-time to another. This is done by selecting good scabs, covering them with beeswax, and immersing them in glycerin or some other preservative fluid until needed. Thus one year's virus furnishes the supply with which to begin the work of the next.

In this way vaccination has been performed from year to year during the whole professional life of many of our oldest practitioners. The common rule of practice is, to vaccinate, and on the sixth to the ninth day visit the patient to ascertain whether it "has taken." If it has not been successful, the child is revaccinated, and, if this fails, the matter is postponed to some future and more favorable time, and often forgotten by both physician and parents. It must necessarily follow, then, that many of these persons are imperfectly vaccinated.

Notwithstanding all these deficiencies in the mode of vaccination, and the very severe exposure to the variolous poison of the persons who contracted the disease at Mr. F.'s funeral, the mortality compares favorably with that of other reports. It is even not much above that cited by one of the most active of recent assailants of humanized virus, Dr. Cameron, of Glasgow. He states that in eight thousand cases of post-vaccinal small-pox recorded in London, Edinburgh, France, and Copenhagen, between 1818 and 1830, the mortality was 1 per cent., and ascribes this favorable result to the fact that these reports cover a series of years which followed so closely upon Jenner's great discovery, that, as he says, "the lymph used was still comparatively fresh."[1] Whether this conclusion is correct or not, it is not within the province of this paper to question. It may be noticed, however, that Dr. Cameron does not take into account, in his argument, the well-established fact that methods of practice based upon recent discoveries are always more thoroughly executed during the years immediately succeeding their introduction, and the recognition of their value, than at a later period. Especially is this true of prophylactic measures, because at the beginning their usefulness is more apparent. Every one feels more keenly the importance of vaccinating carefully during the prevalence of small-pox than after its disappearance for some years; and so, undoubtedly, the same feeling led to a better performance of the operation soon after its introduction, when the widely-spread ravages of small-pox were yet fresh in the memory of many vaccinators, and when the new practice had yet to contend with inoculation, which was itself often as dangerous as the disease taken in the natural way. Now, after continuous observation, during more than three-fourths of a century of the efficacy of vaccination under every variety of conditions, we have become careless in the performance of it, which, although it may be taken as one of the best proofs of our confidence in its protective power, has probably been one of the principal causes of the increase of post-vaccinal small-pox. Furthermore, this remissness on the part of vaccinators has not only led to bad results in their own work, but has lowered the popular estimate of the importance of performing the operation thoroughly, until it has come to be regarded by many persons as so simple and trivial an affair that any one can execute it, and be the judge of its success, and given rise to the practice of self-vaccination. Instances of this kind, in which all the members of a family have been vaccinated by one of themselves, with virus obtained, perhaps, from the arm of a neighbor's child, are frequently observed in this city and the surrounding country. May it not be assumed, then, that there were many persons among the twelve hundred who attended Mr. F.'s funeral that were supposed to have been under the influence of the vaccine disease, who may

[1] London *Lancet*, American Reprint, p. 475, 1880.

have had marks on the arms, and yet were entirely unprotected against small-pox, simply because they had been carelessly vaccinated.

This being admitted, the deterioration of the protective influence of the humanized virus used in these one hundred and ninety-four cases, which was certainly very many removes from the cow, may be considered as almost *nil*, since the mortality of the whole number who bore vaccine marks was only $2\frac{4}{7}$ per cent. If none had died, it would have been said that the protection was perfect.

It seems reasonable to conclude, then, that the cause of death in the $2\frac{4}{7}$ per cent. of these cases was owing to imperfect performance of vaccination, carelessness in the selection of crusts, and neglect on the part of both physicians and patients in those instances in which a full development of the vaccine disease did not follow a first or second vaccination, rather than to any loss of vitality in the virus consequent upon its repeated passage through, and regeneration in, the human body.

REMARKS UPON SMALL-POX AND VACCINATION.

BY HARVEY L. BYRD, M.D.,
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THE prevalence of small-pox in so many portions of our country during the autumn and winter of the current year, would seem to render almost anything that might be said, looking to its amelioration or prophylaxis, particularly interesting to the profession at the present time.

The March (1881) issue of the *Independent Practitioner* contained an exceedingly practical article on the mode of vaccinating, from the pen of Dr. Barton Dozier, an intelligent young physician of Ukiah City, California; and as I have practised his method in about two hundred cases, I am prepared to speak of it in terms of genuine commendation. He says: "I use *only fresh bovine virus*, and prefer that on ivory points to any other. I dip the point to be used in *cold water*, then lay it aside, in order that the virus coating may become well dissolved or softened. In the interim, I scarify with a dry ivory point, stroking just hard enough to scrape off as completely as possible, *without bringing blood*, the cuticle or scarf-skin, for a space of about a quarter of an inch square. I then rub the previously prepared point over this abrasion, until the virus is all off, and insist on the sleeve being kept up for at least five minutes *after* the operation is completed." Dr. Dozier further recommends that "a piece of adhesive plaster of sufficient size to cover the scarification" should be applied before the sleeve is drawn down. He tells us that he "got as a result *ninety-seven* per cent. of successful vaccinations."

My own success has equalled his since I have adopted his method, and such of my professional friends as have pursued the plan of *scraping* off the cuticle, have been highly pleased with the results. In fact, I think it capable of affording more satisfaction than any other method whatsoever.

My failures have been absolutely *nil*, where the susceptibility to the action of vaccine virus had not been overcome by its previous introduction into the system, or an attack of variola, since I have adopted the course recommended above. I am fully satisfied, from long experience, that vaccination, when performed according to the usual methods, and with humanized virus, may be repeated successfully a number of times before the system is thoroughly *saturated* with it, or a point of complete immunity against an attack of variola is reached. I use the word saturated for the lack of a more expressive one, as I am entirely satisfied that when a certain point is reached, the system will receive no more impression from the virus; and then the protection against small-pox is perfect and absolute for all time to come. How often it may be necessary—if necessary at all—to repeat the process of vaccination by *scraping* off the epidermis and applying *bovine virus*, fresh from the cow, I am not prepared to say, as my experience in this way has been too brief. But when the point of saturation is reached, the system is fully protected against the invasion of variola.

Another interesting fact mentioned by writers on vaccination, has frequently been verified by my own observations, and the truth of which should be as widely disseminated as possible, viz., that vaccinia may be successfully introduced, and its protective power secured even in the very presence of variola, so to speak; and its influence against the latter relied upon implicitly. Thus, by way of illustration, a case of small-pox may occur, or is introduced into an unprotected, unvaccinated family, but should successful vaccination with bovine virus be immediately, or even within a few hours, performed upon the other members of the family or household, such persons will be protected entirely from the variola under which the patient labored. This fact I have verified in several instances, and would respectfully and confidently urge its adoption as a safe and reliable prophylactic against the small-pox germs or contagion, even after pustules have been fully developed, and free intercourse has taken place for several hours between the patient and unvaccinated persons. The more rapid saturation of the system by the vaccine virus, and consequently earlier development of the several phases, or stages, of that disease, than that of the variola germs, should always cause it to be resorted to with reliable bovine virus, whenever an unvaccinated person is brought into contact with one suffering with small-pox. I favor repeating vaccination from time to time, until it ceases to affect the system, and when this point is reached, I feel warranted in saying that the protection against small-pox is absolutely perfect; the dicta and illogical statements of the opponents of Jenner's immortal boon to the human race to the contrary notwithstanding.

ETHIDENE POISONING.

BY EDWARD T. REICHERT, M.D.,
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ETHIDENE, or what is more technically expressed as ethidene bichloride, has recently come into vogue

across the water, and has been used to a considerable extent since the researches of the British Medical Association Committee were published, with results in some instances, as might have been anticipated, of the most painful nature.

In a recent article[1] I protested against the indiscriminate use of chlorinated, brominated, and iodated anæsthetics, and showed that among the most dangerous of all properties possessed by anæsthetics in general were decided depressing effects on the heart, and their liability to act at times altogether out of proportion to the dose, and that both these properties were possessed to a very notable degree by the compounds containing either of the halogens as constituents. Special reference was made to the ethidene bichloride, and evidence given which decidedly indicated that this substance markedly depressed the heart, and moreover, that a death had already occurred from its use. Since the publication of this article, I have gathered more evidence to substantiate these statements.

A record of about three thousand administrations with a list of three deaths, and four cases in which the most alarming symptoms ensued, imperatively cries a halt to this sort of experimentation, and drives the very chloroform death-list to shame; and at the present rate, the size of the death-list from chloroform in comparison with that of ethidene will be as insignificant in its proportions as the ether death-list is to chloroform. Therefore, in order that the profession in this country may fully appreciate the grave perils attending the use of this new anæsthetic, I have appended a summary of the above cases:

CASE I.[2]—A lady, about sixty, had lost blood from a vascular growth of the urethra. Within the first two minutes of inhaling I felt the pulse become small, and removed the inhaler at once. She continued breathing regularly fifteen or twenty times, then the breathing intermitted; the pulse was now imperceptible. I used artificial respiration. She recovered in two minutes; the pulse remained feeble; but I kept her insensible by occasionally giving the bichloride during the operatton.

CASE II.[2]—A gentleman, aged thirty, was about being operated on for fistula. I gave nitrous oxide till he was stertorous, adding ethidene carefully. The pulse becoming small, I allowed fresh air for three inspirations. He then became delirious, and struggled, passing quickly into a state of opisthotonos. I allowed air till he had so far recovered as to speak, and then renewed the ethidene. As he became stertorous, I noticed the pulse became intermittent and stopped. I removed the inhaler; the breathing continued firm and regular. In about twenty seconds the pulse returned; the patient awoke in five minutes in glorious spirits, though covered with perspiration.

CASE III.[2]—An old gentleman had lost blood for a long time from piles. At first I had difficulty in making him breathe regularly. At last he commenced panting very quickly. As he began to snore, I noticed the pulse began to fail, and it stopped. I drew his head to the edge of the bed, allowed it to fall back, and drew forward the tongue, with my long finger passed into the pharynx. Artificial respiration was carried on for two minutes, when he recovered. He was put again in position, and I continued to keep him insensible by ethidene during the operation. In five minutes after it was over, he expressed his satisfaction in the liveliest manner.

CASE IV.[1]—A man was about to have an operation performed for hæmorrhoids. He was pale from a loss of blood which had been going on for six months. The heart sounds were normal. Being placed on the right side, with his knees drawn up, bichloride of ethidene was administered with the gas, and ether inhaled. He did not respire regularly at first, but he never coughed, and was not observed to swallow. After twelve or fourteen respirations he talked and commenced to struggle. The face-piece was then removed for a little distance from the face, to allow him to breathe some fresh air. The struggling and convulsive movement which followed interfered with the precise observations of the state of the pulse; when these had ceased there was hardly any pulse, and it soon disappeared, but he continued to breathe ten or twelve times in a satisfactory manner, and then a pause was noticed between the respirations. His head was immediately extended backwards and downwards over the edge of the bed, and the tongue drawn forward, whilst the feet were raised, and artificial respiration commenced. This, in about a minute, restored him so far as to cause him to try to speak in an indistinct manner, as a patient often does just before waking up. The pulse became distinct, all danger seemed past, and he was again placed in position for operating. In doing this, he seemed to raise his head voluntarily, and some more of the anæsthetic was about to be given, when the pulse was again noticed to be failing. Without loss of time, the artificial respiration was recommenced as before, and, during the first three minutes, there were several natural gasping inspirations, but the pulse was never felt again.

Autopsy.—Heart large and flabby, with the usual amount of fat on it; heart substance on section had the ordinary appearance of fatty degeneration. The lungs were a little emphysematous and congested posteriorly, but fairly crepitant. Microscopical examination of the apex of the heart, including the extremities of both ventricles, was found to have undergone extensive fatty degeneration.

CASE V.[2]—A man, aged forty-five, was suffering from effusion into the right pleura cavity, and, after having determined that he was suffering from pyæmia, it was decided to give ethidene. During its administration the patient struggled a good deal, but nothing alarming occurred until he was "under," when it became necessary to turn him over on the left side and make an incision. He had not been in this position over two seconds when the pulse and respiration were found to be failing, and the pupils were noted to be widely dilated. He was then immediately turned on his back, artificial respiration commenced, and stimulants freely applied to the heart; first, by slapping the cardiac region with the hand, and afterwards, by a needle and galvanic current, but the only result was to get one long inspiration.

Autopsy.—The right auricle and ventricle contained much dark fluid blood; the tricuspid valve admitted four fingers. The left ventricle was empty. Microscopical examination of the heart showed no fatty degeneration. Other points of the autopsy are not of interest in this connection.

CASE VI.[3]—A boy, aged nine, was placed on the operating-table for operation of peritomy. Ethidene was given, and he was brought under its influence quietly and quickly. He then vomited freely, and more ethidene was given, but it was observed that his pulse

[1] Am. Journ. Med. Sciences, July, 1881.
[2] Clover, Brit. Med. Journ., 1880, I., p. 797.
[1] Clover, Brit. Med. Journ., 1880, I., p. 797.
[2] Mouillot, Brit. Med. Journ., 1881, I., p. 385.
[3] Everard, Brit. Med. Journ., 1881, I., p. 431.

became weak and fluttering, but rapidly recovering on stopping the ethidene. On resuming the ethidene anæsthesia was induced in about twenty seconds, and the operation commenced. It was very nearly completed when the pulse became almost imperceptible, and ceased entirely, together with the respiration; the face became cyanotic and congested, and the pupils widely dilated. The head was promptly but deliberately lowered, the chin drawn away from the sternum, and complete inversion of the body practised by suspending the child by the feet. He showed no signs of life for two minutes, when a long, deep gasp ensued, followed by renewed and deeper lividity of the face. In another minute another deep gasp ensued, and finally, by interrupted pressure over the cardiac region and lower ribs, the respiration and circulation were completely established.

CASE VII.—This case, in which death ensued, occurred in Berlin, and was reported by Kappeler in Part XX. of Billroth and Luecke's *Surgery*. I am, unfortunately, unable to give the details.

It will be noticed in reviewing the above cases that in every one of them, except the last, in which no details are given, there was a manifest and unmistakable failure of the heart, and that both deaths were due to this cause. In each of the other four cases the pulse had entirely ceased, and it was only by the efforts of the attendants that the heart's action was restored. It is also a noticeable fact, that while the above experimentors appreciated the depressant action of the drug on the heart, yet in not a single instance is there any evidence to show that any of them were aware of the fact that amyl nitrite had proved so beneficial in chloroform poisoning and other states of cardiac depression, or that its use was even thought of in case of accident during their rash procedures. Ethidene was abandoned by Snow on account of its dangerousness, and every investigator since his time must have appreciated the truth of his belief. The experimental researches of the British Medical Association Committee and Reeve have clearly demonstrated a decided depressant action on the circulation, and notwithstanding the fact that the above Committee were lead to anticipate from the results of the experiments on animals that there was a danger of cardiac failure, they, after making six experiments on man, reached the unwarrantable conclusion, that the anæsthetic "presents all the advantages of ether, without any of its disadvantages." The Committee state that in these six experiments no failure of cardiac action was present, yet their own, and also Reeve's, experiments on animals, as well as the evidence of Liebrich, Steffen, Clover, Hodges, and Mouillot, who have used the anæsthetic on man, all testify to the contrary. Hodges even thinks that it more quickly and markedly depresses the heart than chloroform, but the balance of the evidence goes to prove that it is not so powerful in this respect, and that it is not so dangerous. This is in accord with my own views, and I think that if the above four cases, in which recovery occurred, had been under chloroform, the chances of resuscitation would have been few indeed.

Our knowledge of the physiological action of ethidene indicates that its action is identical with that of the ethylene compounds, and having this fact in mind during a study of the latter preparation,[1] I considered it as the equivalent of ethylene bichloride, and stated that as an anæsthetic for general use the ethylene compound was undoubtedly superior to any yet introduced, with the exception of its isomer ethylidene chloride (ethidene bichloride) and ether, and was inferior to the latter in but the single point regarding the relative degree of safety, and that while it was probably equal to chloroform in strength, promptness, and permanency of effect, it was fully as much superior to it in a point of safety as it was inferior to ether, and that in case of accident following its use, the absence of the pulse at the wrist would not be so serious as under other circumstances. These deductions were the result of a careful study of direct experimental evidence, to which I will have to refer the reader, and I have had no sufficient reason since to alter my opinion, although the large percentage of deaths and accidents, as above given, makes it appear that ethidene is probably more dangerous than chloroform, but which cannot be so in view of our knowledge of its physiological action.

Ethidene is certainly a very dangerous anæsthetic, and should not be used except in cases where ether is contraindicated, and never without observing the precautions necessary in the use of chloroform, or without the amyl nitrite at hand.

HOSPITAL NOTES.

PHILADELPHIA HOSPITAL.

(Service of J. WILLIAM WHITE, M.D.,).

APPARENT PROTECTION FROM SYPHILIS AFFORDED BY PHAGEDÆNA.

(Reported by W. A. EDWARDS, M.D.)

CASE I.—John F., æt. fifty, was admitted to the venereal wards of the Philadelphia Hospital, on November 16, 1881. He was then suffering from a sore, which had appeared about six weeks previously, on the left side of the inner surface of the prepuce just posterior to the corona; in the left groin he had a very irritable sloughing bubo, about four inches in diameter. The sore presented the following appearances.

It was slightly elevated above the surface, the edges were sloping, its floor was grayish, and in places was covered by false membrane or a scaly exfoliation; the secretion was scanty and serous. The induration was very characteristic, firm, and cartilaginous, circumscribed and movable upon the surrounding tissues; this feeling was persistent throughout the case. There was no pain or tenderness. In other words it was a typical indurated or "infecting" chancre. The bubo, as before mentioned, was situated in the left groin about midway between the anterior superior spinous process of the ilium and the symphysis pubis. It was an open sore, highly inflamed and painful, the gland tissue being entirely broken down; its interior was covered with a grayish diphtheritic deposit, and its edges were everted and undermined. It was extending rapidly. The man was placed at perfect rest, iodoform was applied to the chancre, and a poultice to the bubo; after a few days the bubo was packed with lint saturated with a weak solution of sulphate of copper, about 4

[1] Phila. Med. Times, May, 1881.

grs. to ℥v.; all sinuses were opened as soon as they formed; this was continued for a short time, but the bubo continued to spread with great rapidity. The acid nitrate of mercury and a solution of the potassio-tartrate of iron were successively applied, but it steadily grew larger, dissecting above and below Poupart's ligament, exposing the external abdominal ring and bringing into view the sheath of the femoral vessels the pulsation of which could plainly be seen on the floor of the ulcer. The actual cautery also failed to arrest the progress of the ulceration, and in spite of tonics, good food, free stimulation and careful attention, the patient died on January 7. No *post-mortem* examination was obtainable. During all the stay in hospital the patient was carefully watched with a view to the recognition of any symptoms of constitutional syphilis. Although the average time for their appearance was far exceeded, ninety-five days after the appearance of the sore having elapsed, there was no evidence whatever, either cutaneous or glandular, of systemic infection.

CASE II.—Hermann S., æt. thirty; was admitted December 2, 1881. He presented a sore just within the meatus, involving both its lips, and which had appeared four weeks previously and about twelve days after intercourse. In the right groin was a very well-marked phagedenic bubo, extending over a large area and causing much destruction of tissue; its sinuses had been slit up before admission, and it had just ceased to spread. In this case, also, the sore had all the well-known characteristics of the initial lesion of syphilis. The sore and bubo were packed with a solution of sulphate of copper, 4 grs. to ℥i., and are now perfectly healed.

This patient, who is still under observation, more than three months having elapsed since the appearance of the sore, has shown no symptoms of secondary syphilis; the epitrochlear and post-cervical glands are not enlarged or indurated; the tonsils and pharynx are normal; no eruption of any description has shown itself.

Remarks.—The chief interest attached to these cases, as pointed out by Dr. White to the class, was in their relation to the conflicting theories as to the manner in which syphilis infected the system at large, and as to the true character of the primary sore; whether it is a local manifestation, as is claimed on the one hand, or the first symptom of constitutional disease, as is asserted on the other.

Admitting that the diagnosis was correct, and that the sores were of the kind that in the vast majority of cases is followed by easily recognized secondary symptoms, the absence of those symptoms is inexplicable, if the chancre be considered an evidence of systemic involvement.

If, however, the chancre be merely the result of local cell proliferation, at the point of original inoculation, and if from that locality the poison gradually find its way into the general circulation through the lymphatics of the penis and the groin, it can readily be imagined that such enormous destruction of tissue and complete elimination of glandular and other structures, as take place in phagedæna, might afford an actual protection from constitutional disease. Ricord and Fournier have both remarked as a clinical fact that phagedæna of the chancre often prevents syphilis from affecting the ganglia. It may be, therefore, that phagedæna of the ganglia exerts a similar influence in the further spread of the disease.

This view would seem to be corroborated by the results of the treatment of chancre by excision obtained by Dr. White, during this term of service, and which will be published when a sufficient number have been observed to permit of generalization.

MEDICAL PROGRESS.

ON A PECULIAR FORM OF GONORRHŒAL ARTHRITIS.—Two varieties of gonorrhœal arthritis are usually described. In the first of these, the serous, the knee is most often affected, but the ligaments and other tissues round the joint escape. In the second form pain, swelling, and redness are all more marked. The connection of the latter variety with gonorrhœa has been doubted, and some authors have regarded it as the rarer form of the two. DUPLAY and BRUN have arrived at a contrary opinion. They state that the second variety occurs with equal frequency in both sexes, that there is no relation between the severity of the urethritis and that of the articular lesion, and that the wrist and elbow are the joints most often attacked. The knee, so often the seat of hydrops, is relatively but seldom affected by this severe form of arthritis. In general there is an incubative stage lasting some days, accompanied by painful tension in joints and muscles, which outwardly exhibit no change, and general depression. Then some particular joint becomes extremely painful and swollen. Pain, aggravated at night and rendered excruciating by pressure, is the first symptom. There is no intra-articular effusion, but extensive infiltration into the surrounding tissues is evidenced by tense and often widespread œdema of the cutaneous coverings. This condition may be mistaken for abscess, and incisions have been made, of course without evacuating pus. The pain on pressure over the line of the articulation, and, later on, crepitation during movement, help to distinguish this disease from phlegmon. The failure of salicylic acid in some cases excludes another source of error. The treatment consists solely in complete fixation of the joint by means of plaster-of-Paris bandages, the application of which is speedily followed by diminution of swelling and cessation of pain. After from four to six weeks the dressing may be removed and passive movements commenced. If, however, the plaster bandages be not applied till after the disease has existed some time, the joint, after their removal, will be found considerably stiffer, or even completely anchylosed. In some cases all treatment fails, and notwithstanding all that can be done, anchylosis results (Duplay and Brun, *Archiv Général de Med.*).—Riedel, in *Centralblatt für Chirurgie.—Edin. Med. Journ.*, Feb., 1882.

PHOSPHORUS AND ARSENIC POISONING.—An interesting series of researches on the pathological changes produced by phosphorus and arsenic poisoning have been communicated to the Société de Biologie by MM. CORNIL and BRAULT. The quantity of phosphorus was equivalent to that contained in four or five matches, or to five centigrammes of arsenious acid. Guinea-pigs to which this dose was given daily lived for four or five days, passing arsenious acid by the bowel and kidneys. The object of the investigation as regards the liver was to discover the seat of the initial lesions, and their mode of extension in the hepatic lobule. The normal liver cells, treated with osmic acid, are limited by a delicate membrane, which presents a double contour, and in the middle of the cavity is a nucleus, which is connected with the capsule by a delicate protoplasmic filament. Six hours after the ingestion of the first dose of phosphorus, the hepatic cells, which are situated at the periphery of the lobule, near the branches of the portal vein, are increased in size; their protoplasm is, as it were, liquefied, and contains albuminous granules and some fine fatty granules. This lesion gradually increases, but remains limited to the periphery of the lobule, until, at the end of twenty-four hours, the cells there are large and distended by albuminous and fatty

granules and globules, while those in the centre are almost unchanged, and two or three days after the commencement of the poisoning the dilated cells constitute a sort of reticulated zone in the periphery of the lobule, and the delicate septum which separates two adjacent cells may break down, so that their cavities become united. The biliary canals present no alteration, even catarrhal inflammation being absent. In arsenical poisoning the change in the liver presents an important difference. The fatty degeneration is less intense than in phosphorus poisoning; but, instead of being confined to the peripheral zone of cells, it is uniformly distributed throughout the lobule. The lesions in the lung produced by the two agents are identical, and consist in a primary fatty degeneration of the epithelial cells of the alveoli; they become large and prominent, filled with granules and driplets of fat, their nuclei being preserved. The cells ultimately become detached, and fall into the alveoli, where they are mingled with an exudation which contains many blood-corpuscles. The change is less constant in poisoning by phosphorus than by arsenic. The resulting exposure of the vessels seems to afford an explanation of the congestions and ecchymoses which are met with in the lung. Partial pulmonary lymphangitis was also found after death from arsenic. The lesions in the kidney are the same as those which have been before described. The epithelial cells of the convoluted tubes are swollen, and contain conspicuous fatty granules a few hours after the commencemt of the intoxication. The cavity of the tubules also contains an exudation which is colored by osmic acid. In cases of longer duration the fatty globules are larger, and the epithelial cells, instead of being sharply separated, are reduced to a uniform mass, more or less filling the tubules. In other organs fatty degeneration of the endothelium of the vessels was also found.—*Lancet*, Feb. 4, 1882.

THE OPTIC DISK IN INJURIES TO THE HEAD.—Dr. A. A. FOUCHER draws the following conclusions from his essay on this subject:

1. In spite of the presence of a papillary stasis due to a traumatic lesion of the brain, acuteness of vision may remain unaffected; hence the importance of an ophthalmoscopic examination of all cerebral injuries, whether vision is affected or not.

2. This vascular stasis, when taken alone, cannot inform us as to the nature or gravity of the cerebral lesion, and its absence does not show the absence of grave lesions of the cerebrum.

3. The only conclusion to be drawn from its presence is that the meningeal fluid is abnormally increased, and as a consequence intracranial pressure is increased, as shown by the compression of the sheath of the optic nerve.

4. This compression may be marked enough to interfere with the circulation of the nerve, and yet not severe enough to interrupt its functional activity.—*L' Union Méd. du Canada*, Jan., 1882.

TREATMENT OF HYPERTROPHY OF THE TONSILS BY IGNIPUNCTURE.—The removal of diseased tonsils by the help of the finger, ligature, cauterization by caustics or the actual cautery, are all methods which have fallen into disuse. In Europe, the bistoury only reckons a few partisans, amongst whom is one of great authority, M. de Saint-Germain. The treatment nowadays most in favor is excision, performed with the guillotine, which has given rise to very serious and often fatal hæmorrhages. It is now alleged that, with the thermo-cautery, this serious accident is no longer to be dreaded. M. KRISHABER, who has tried it during two years, and has collected more than forty cases (*Annales des Maladies de l' Oreille et du Larynx*, July, 1881), has never had any accident after this treatment, and the results obtained have been lasting. It is likewise a novel application of a method which he has found perfectly successful for granulations of the larynx and pharynx. He proceeds as follows: The patient is placed—firmly, if a child—as if for laryngoscopic examination, in front of the operator, the mouth open, the tongue held back by a large spatula, the bottom of the throat well illuminated. M. Krishaber generally uses Paquelin's narrow-pointed thermo-cautery, heated to red-heat. When it is only required to modify the nutrition of the gland, he gives preference to Trouvé's polyscopic galvano-cautery. The puncture of the gland, made as deeply as possible with the point of the instrument, should be repeated five or six times at each sitting. An interval of two or three days is left between the sittings, so as to allow the fall of the eschar, and to estimate the result. The operation is not at all painful, and pain, from burning, is rarely felt. Nothing need be administered after the operation, except, in some cases, a gargle of warm water, slightly carbolized.—*British Med. Journ.*, Jan. 28, 1882.

INJECTIONS OF AN ALKALINE SOLUTION OF SALT INTO THE VESSELS IN ACUTE ANÆMIA.—E. SCHWARZ (*Centbl. f. Gynäkol.*, No. 20, 1881) holds that in cases of death from sudden hæmorrhage the fatal result is due not so much to the loss of blood-corpuscles as to the sudden change in the relation between the quantity of the blood and the capacity of the containing vessels. He refers to Goltz's work in *Virchow's Archiv*, No. 29, "On the Tonicity of the Vessels and its Relation to the Blood-Current." The writer, after taking two-thirds of their blood from dogs, injected a solution of salt, and from the good results he obtained, recommends this method in the human subject, not only for the collapse following profuse hæmorrhage, but also for that caused by severe wounds or prolonged operations, as in abdominal surgery, in which latter case he attributes the collapse to paralysis of the abdominal muscles. He recommends that 500 cc. should be the minimum amount injected, and says that three or four times this amount would do no harm. J. J. BISCHOFF, in the same Journal (No. 23), refers to the above paper, and gives his case as an instance of the value on the human subject of what had been used experimentally on animals. The patient suffered from post-partum hæmorrhage; the pulse scarcely perceptible, 156; respirations 42, had cold extremities, and was very restless. A 6 per cent. solution of salt, with a few drops of caustic potash and soda, was injected into the left radial artery in the direction of the blood-current, and the wounded vessel subsequently tied at both ends. A blunt vulcanite cannula, previously rendered aseptic, was employed. In the course of an hour 1250 fluid grammes was thrown in at a pressure of a column 58 to 60 cc. high. During the injection the patient revived, the pulse sank to 122, and she became quiet. Ultimately she recovered perfectly. It was noticed that meanwhile the hands regained their natural color and sensibility. The writer recommends similar treatment in cases where the blood-forming glands are healthy, but where there has been a sudden diminution in the quantity of blood, he suggests that even greater quantities of fluid might be injected, the injections to be continued from time to time till good results are obtained.—*Edin. Med. Journ.*, Jan., 1882.

IMPURE CHLOROFORM.—M. LUCAS-CHAMPIONNIÈRE has lately read a paper at the Paris Société de Chirurgie entitled "Etudes sur la Chloroformes." In it he states that Sédillot, who took great trouble to obtain pure chloroform, never had any accidents during its use. M. Perrin, in 1878, called the attention of the Academy

to the changes in chloroform. Wishing to remove hæmorrhoids with the *écraseur*, M. Lucas-Championnière anæsthetized his patient. All went well; but an hour afterwards a violent rigor supervened; in the evening, the patient was doing well. Four days afterwards, M. Championnière undertook the removal of a subcutaneous lipoma, near the scapula; the patient was chloroformed, and had a rigor like the one above mentioned. All the patients operated upon under chloroform at that time suffered from rigors. When the chloroform was changed, this symptom no longer appeared. In lying-in women, with certain kinds of chloroform it is impossible to produce hemianæsthesia. It becomes, then, a question, what are the substances which change the chloroform? On the 5th of July last, M. Lucas-Championnière performed the operation of radical cure of a very large right inguinal hernia, in a woman. Chloroform was administered; the respiration stopped. The patient was inverted, and artificial respiration applied; respiration returned at the end of four minutes. The chemist to the hospital declared that the chloroform was pure. Later on, in the same hospital, a youth, eighteen years of age, could not be anæsthetized; respiration stopped and necessitated inversion. Three days afterwards, with another kind of chloroform, the same patient could not be anæsthetized; but this time he became cold. On the next day, he was anæsthetized with another kind of chloroform. The first chloroform was examined by a distinguished Parisian chemist; the boiling-point was found to be modified; this chloroform was, therefore, impure, although the ordinary reagents testified to its purity. Permanganate of potash passes from red to green, if chloroform contain organic substances. With these reagents, M. Lucas-Championnière has found that throughout Paris there was no pure chloroform, although some specimens were almost pure.—*British Med. Journ.*, Jan. 14, 1882.

A Remarkable Gun-shot Wound of the Abdomen.—Dr. J. A. Rafter reports a remarkable case of gun-shot wound of the abdomen of a boy fifteen years old. The charge of a shot-gun, discharged about a foot from his body, entered the abdomen two and one half inches to the left and two inches below the umbilicus, making a terrible-looking opening, nine and one-half inches in circumference, tearing away the abdominal muscles to that extent, and leaving his intestines exposed and powder-burnt, and the intestinal liquid was plainly to be seen oozing from them at several points.

On turning him over, it was found that the charge had passed through him, shattering the ilium, and coming out at a slightly lower level than it had entered, and a trifle nearer the lateral aspect of the body. The posterior wound was the smaller; its lips were protruding and lacerated, due to the lodgment of gun-wadding, pieces of coat, vest, pantaloons, and shirt, which had been driven through him. When Dr. Rafter again examined the anterior wound, he found that considerable fecal gas and fluid had escaped from it.

The treatment ordered was nutritious diet, all the milk and brandy the patient's stomach would bear, and opium enough to check all peristaltic action, and keep him perfectly quiet. The case recovered.—*Med. Record*, Jan. 21, 1882.

Treatment of Rupture of the Uterus by Drainage.—In a recent number of the *Archiv für Gynäkologie*, Dr. Felsenreich reports a successful case. To understand why a treatment succeeds, we must know why patients not treated die, and what unfavorable condition it is that the treatment removes. Now, the peritoneum has a great power of absorption, and, by exudation of organizable lymph, of encapsuling and shutting off foreign matter from the general peritoneal cavity. There is no evidence that liquor amnii in the peritoneum is particularly hurtful, and large quantities of blood may be effused without causing peritonitis. There therefore seems no reason why the mere presence of the child, of blood, and of liquor amnii in the peritoneal cavity should not be tolerated. And as to drainage, the experience of ovariotomists tend to show that under ordinary conditions the peritoneum will recover from the effects of surgical interference better without the drainage-tube than with it. The special service which drainage renders in rupture of the uterus is probably this: the peritoneum not merely has to dispose of some amount of blood and perhaps liquor amnii effused into it, and to repair a solution of its continuity; in addition, there is constantly being poured into it, through the rent, secretion from the interior of the uterus, as well as from the wound, and these secretions partly accumulate and decompose. It is these decomposing fluids which excite inflammation, and drainage, by keeping open a channel for their escape, and so preventing their stagnation, gives the patient a better chance of recovery.—*Med. Times and Gaz.*, Jan. 7, 1882.

Treatment of Snake-bites.—Mr. Vincent Richards offers the following suggestions as to the treatment of snake-bites:

1. In the case of the bite being on a limb, a ligature should be at once applied above the bitten part, care being taken that it is sufficiently tight to prevent any blood being taken up into the general circulation from the distal end. Give a full dose of opium—40 minims of the tincture—or half a grain of morphia hypodermically.

2. Inject hypodermically into the bitten part a solution of permanganate of potash—4 grains to one drachm of water—and well press the parts with the fingers.

3. Open a vein below the bitten part, and wind round the limb an elastic bandage so as to exsanguinate the limb below the bitten part.

4. Cut through the bitten part and when dry apply pulverized permanganate of potash and then loosen the ligature. In the case of a person being bitten on the trunk, any treatment however prompt may be useless. Nevertheless it would be advisable to well inject the part with permanganate of potash, giving a full doze of opium as before recommended.

It may not be generally known to the members of the profession that a *poisonous* bite may be easily ascertained by cutting through the punctures into the areolar issue beneath, when if a red-currant jelly-like appearance is observable the bite is poisonous. The merit of pointing out the diagnostic value of this local appearance is due to Dr. Wall.—*Indian Med. Gaz.*, Jan. 21, 1882.

Genital Irritation.—From a study of nineteen cases, Dr. Landon Carter Gray believes:

1. That there is no proof that genital irritation can produce a reflex paralysis.

2. That while it is probable that slight nervous disorders, as incontinence, retention, difficult micturition, erratic movements, and slight nervous disturbances can be produced by genital irritation, the proof is not yet complete.

3. That operations for the removal of genital irritation may be beneficial even in organic nervous disease.

4. That we should, therefore, remove such genital irritation, if it exist in any case whatsoever, and thus give our patients the benefit of the doubt.

5. That in all cases of nervous disorders, with accompanying genital irritation, we should not regard the latter as the cause of the former until all other probable or even possible causes have been rigidly excluded.

6. That operations upon the genitals, even when there be no genital irritation, may prove to be a useful therapeutic measure in certain cases.—*Ann. of Anat. and Surg.*, Feb., 1882.

IODOFORM IN SURGERY.—In the *Berliner Klin. Woch.*, December 12, PRIVAT-DOCENT MIKULICZ terminates a paper upon the most recent employment of iodoform in Billroth's clinic with the statement that all the trials made with this substance justify the following conclusions: 1. Iodoform is, for all conditions in which the direct application of an antiseptic is indicated, an excellent means, deserving preference to all other substances hitherto used for this purpose. 2. The iodoform dressing may be used as a substitute for the carbolized gauze dressing of Lister, and is preferable to this on account of its simplicity and certainty. 3. The iodoform treatment admits of the antiseptic treatment of a wound, even under conditions that hitherto did not allow of a powerful antisepsis being pursued. 4. In wounds and ulcers already septically infected, iodoform, as a rule, operates more quickly and certainly than other antiseptics, while it does not irritate the tissues. 5. Iodoform acts in a specific manner on syphilitic, tubercular, scrofulous, and lupous infiltrations.—*Med. Times and Gaz.*, Jan. 7, 1882.

LITHOTRIPSY AND LITHOLAPAXY.—Prof. BILLROTH, in an address made before the Weiner k. k. Gesellsch. der Aerzte, stated that before the adoption of Bigelow's method he had performed lithotripsy in 43 cases; in 2 of these the operation had to be abandoned and lithotomy performed, while of the remaining 41, 9 died. The number of operations, the fatal cases included, averaged 3½ for each case, the length of the sittings being from 10 to 15 minutes. In 6 cases on which he had operated after Bigelow's method, the duration of the operation was prolonged to nearly two hours without causing any unfavorable result. The only patient which he had lost after litholapaxy had died from hæmo-globinuria produced by poisoning with chlorate of potassium.

Prof. DITTEL also stated that he had made use of this method in ten cases, in all with favorable results, and that he believed in future lithotomy would be restricted to children and to cases complicated by an encysted calculus.—*Centralb. f. d. Med. Wissen*, Dec. 24, 1881.

PILOCARPINE IN DIPHTHERIA.—M. ARCHAMBAULT has recently made a communication to the Société de Thérapeutique, and gives the results of this method of treatment in twenty cases occurring in children. He found that it was impossible to give pilocarpine hypodermically from the violent terror and prostration nearly always produced. He therefore administered the drug in the form of an injection. He finds that pilocarpine seems to facilitate somewhat the loosening of the false membranes, but that this is the best that can be said about it, and out of the twenty cases he lost twelve. M. Archambault states that in future he will abandon completely the use of this drug.—*Revue Scientifique*, Jan. 21, 1882.

PATHOLOGICAL ANATOMY OF THE SPINAL CORD IN PHOSPHORUS POISONING.—M. S. DANIELO, from researches on this subject, gives the following *résumé* of his conclusions:

1. The alterations of the spinal cord in phosphorus poisoning are of the nature of a myelitis, whether central (peri-ependymal) or diffuse.

2. In acute cases, deposits of blood pigment, noticed for the first time by the author, occur in the central nervous system.

3. Large doses of phosphorus cause a central myelitis through the whole extent of the cord, with the formation of blood extravasation and deposits of pigment. Smaller doses, frequently repeated, produce a diffuse myelitis involving both the gray and white matter.

4. By means of phosphorus, therefore, an inflammatory irritation either of the nature of a diffuse myelitis, occupying both the gray and white matter, or an inflammation confined to the gray matter, may be produced at will.

5. The nervous phenomena observed during life, may be attributed to one or the other of these forms of spinal inflammation.—*Bull. Gén. de Thérapeutique*, Jan. 15, 1882.

TREATMENT OF FRACTURE OF THE CLAVICLE WITH SILVER SUTURES.—The unsatisfactory results which ordinarily follow treatment of fractures of the clavicle, in spite of the numerous forms of apparatus at the service of the surgeon, have led Dr. LANGENBUCH to attempt the above method. He reports the case of a boy, ten years of age, with a fracture between the middle and outer third of the left clavicle, which he treated by cutting down on the seat of fracture and suturing the ends of the broken bone accurately together with silver wire, and the periosteal sac with catgut sutures; the wires being so twisted that the ends could not perforate the skin, the wound was treated antiseptically, the arm being fixed by a Desault bandage. An ideal result is said to have been obtained.—*Deutsche Med. Woch.*, Jan. 28, 1882.

MANIA ACCOMPANYING SCARLATINA.—Mr. R. B. MITCHELL reports in the *Edinburgh Med. Journal*, Feb., 1882, a case of violent mania, characterized by delusions, occurring in a woman, aged fifty years, during an attack of scarlatina. A similar case was mentioned in our issue of Jan. 7, p. 15.

WRITERS' CRAMP.—The treatment of functional spasmodic affections in general is so very unsatisfactory, that we should gladly welcome any substantial addition to our therapeutic knowledge from any quarter. M. WOLFF, a German teacher of writing, has earned for himself a considerable reputation by his skill in the treatment of this class of affections; and his success is attested by such authorities as Nussbaum, Bamberger, Benedikt, Billroth, and Esmarch. Hearing of the beneficial results of his system, M. Charcot invited him to Paris, and placed under his care two patients suffering from writers' cramp, who had been treated by himself and M. Vigouroux for some months without any improvement. M. Vigouroux has published the cases (*Le Progrès Médicale*, 1882, No. 3), and mentions that, after being handed over to M. Wolff, the first was cured in fifteen, and the second in thirteen days. M. Wolff's system consists in a combination of gymnastics and massage. He makes his patients execute movements in all directions with the affected hand for half an hour to an hour and a half at a time, three or four times a day; and, in addition, the muscles involved are stretched more or less forcibly three or four hundred times daily. He also uses massage and friction, and attaches considerable importance to percussing the affected muscles. The most essential part is the extension of the spasmodic muscles. He thinks, if no improvement is apparent after five or six sittings, the case should be abandoned. The method is worth imitating, though, as M. Vigouroux remarks, while M. Wolff generously explains his procedure, he cannot give us, at the same time, his experience, his practical skill, or that medical instinct which not only enabled him to devise his method, but guides him in its application.—*British Med. Journ.*, Jan. 28, 1882.

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SATURDAY, FEBRUARY 25, 1882.

NATIONAL PUBLIC HEALTH LEGISLATION.

II. THE NATIONAL BOARD OF HEALTH.

FIVE bills, affecting the National Board of Health, have thus far been introduced during the present session of Congress.

One of these, which has passed the Senate and is now before the House, directs the National Board of Health to obtain pure vaccine virus, and to furnish it to all persons applying for it at cost price, and appropriates fifteen thousand dollars for that purpose. Upon this, it is only necessary to remark, that vaccine virus should be not only pure, but fresh; that it should, therefore, be sent direct from the farm to the consumer, and that the National Board would do much more good by having made frequent careful inspections of the establishments of persons furnishing vaccine virus for sale, and by publishing the results of these inspections, than it would by undertaking to buy and sell the article.

The other four bills relate more especially to the quarantine duties of the Board, and are substantially identical. We select for comment the latest one, namely, that introduced by Mr. Van Aernam, the Chairman of the House Committee on Public Health, numbered H. R. 4043, February 6, 1882, and entitled "A Bill to Prevent the Introduction of Contagious and Infectious Diseases into the United States."

The greater part of this bill is merely a repetition of the provisions of the original quarantine act passed in the spring of 1879; the author apparently thinking it better to present the whole original act, as it would appear if amended, than to present merely the provisions for the amendments desired. It is not easy to understand the changes which this bill would make in the powers and duties of the National Board of Health as regards quarantine, but from a careful comparison with the original act, with the annual reports and recommendations of the Board as regards this subject, and papers read by individual members of the Board before various associations, the following seems to be a fair statement of the case:

On the 1st of January, 1880, after the experience of one season's working of the quarantine act, the National Board of Health presented a report to Congress, concurring in certain recommendations made by a special committee of the National Academy of Science, of which Dr. S. Weir Mitchell, of this city, was chairman.

This Committee recommended "that the act to prevent the introduction of contagious and infectious diseases into the United States, approved June 2, 1879, should be so amended that, in order to enforce the penalties provided in that act for vessels which shall enter, or attempt to enter, ports of the United States in violation thereof, it shall not be necessary to show that the port of departure was at the precise time of departure of such vessel actually infected with contagious or infectious disease, nor that ten days of official promulgation in the port from which said vessel sailed, shall have been effected. It seems preferable that all vessels from foreign ports coming to ports in the United States, shall be required to have bills of health. It is also recommended that the medical officer, who has to serve in the office of the consul at a foreign port, may be either detailed by the President, or appointed by the Board at its discretion."

It does not appear that any action has ever been taken by Congress upon this conjoint recommendation of the Academy and the Board. The bill now under consideration attempts to avoid one of the difficulties met with under the working of the original act, by providing that a formal notification to foreign ports through the Department of State of the provisions of the act, and the rules and regulations made in pursuance thereof, has been made for at least ten days in the port is all that is needed to bring a vessel sailing from that port under the provisions of the law, provided contagious and infectious disease exists there.

This "notification through the State Department," is to take the place of the "official promulgation" in foreign ports required by the existing law, and which has made the law practically a dead letter for certain ports, and more especially those of Cuba, to guard against the dangers from which the law was mainly intended. Official promulgation is, it seems, something which can only be effected with the consent or by the authority of the government

of the port interested, and the Cuban government has thus far refused to give its consent; such consent is, however, not necessary to the notification provided in the present bill, so that this amendment is in accord with the recommendations above referred to. It is probable, however, that this amendment is in itself of comparatively small importance, so long as the proviso that bills of health are to be required only from ports in which contagious and infectious disease exist, remains in the law.

The proper course would seem to be that recommended by the committee of the National Academy, viz., that all vessels from foreign ports coming into ports of the United States, shall be required to have a bill of health, to be signed by the United States consular officers, which is the system of Portugal. The importance of this does not, however, depend so much upon its utility in preventing the importation of contagious diseases, as it does in the tendency which it would have to secure clean ships and the health of seamen; and it is from this point of view largely that we think the general government should legislate in this matter. The National Board of Health does not appear to have again called the attention of Congress to the difficulties in enforcing the act dependent upon the causes to which we have referred, and the reason for this, as given by Dr. Billings, in a paper read before the London Medical Congress, was that it was considered best "to obtain by conference between the nations most interested on international system of prompt and reliable information as to the sanitary condition of ports and ships, which information should in part be carried by the ship itself, in the form of a bill of health, and in part, in the case of a presumably affected ship, preceded in the form of a telegram."

In accordance with this view, the International Sanitary Conference met in Washington a year ago. The full proceedings of this conference have not yet been published, and with regard to the value of the results obtained from it, there seems to be some difference of opinion. It approved the new bill of health proposed by the National Board of Health, which is a simple description of the sanitary condition of the port and of the vessel without any reference to free pratique or quarantine, but we have not heard that, as yet, the actions of the conference have been given practical effect by any of the governments represented.

Mr. Van Aernam's bill also provides for the appointment, by the Board, of medical officers at certain foreign ports, as recommended by the committee of the Academy; and for the sending free through the mails of reports, etc., destined for the Board. It will be seen that very little change is proposed by the bill in question. It must be remembered, however, that the present so-called quarantine act is to be in force only four years from the date of its passage, in June, 1879. We presume, that if Mr. Van Aernam's bill becomes a law, it will practically do away with this limitation of time, although this is not certain in the absence of a special repealing clause.

BRIGHT'S DISEASE IN LIFE INSURANCE.

THE frequency of totally unsuspected Bright's disease is not slight, and for life insurance companies it is a very serious matter. A single undiscovered case may cost them five, ten, or even twenty-five thousand dollars. Every careful doctor knows that he meets constantly cases in which examination of the urine reveals a previously unknown, but evidently long-existing, Bright's disease, which, when discovered, is irremediable, and goes steadily, though it may be slowly, down to the grave. Most of our insurance companies insist on an examination of the urine in all applications for $10,000 or over; others, more wisely, set the minimum at $5000; but experience has shown that no risk whatever should be accepted without such an examination. Nay, more, we go so far as to say that prudence dictates that every person of forty years old and upwards should have the urine examined once a year, especially if he have the serious nervous strain which attends heavy business responsibilities or laborious professional work. We go to our dentist annually to see if our teeth need repairing, *i. e.*, to see if any unsuspected disease be arising. At the worst, if we neglected to do so, we would but lose our teeth after years, and have to replace them by a less convenient and more costly artificial set. But if the kidney become diseased ——?

It may be said that it would add largely to the cost of medical examinations. True; but, *per contra*, it would save twice or thrice, possibly tenfold, its cost, in the escape from risks that are sure to die within a very few years and entail large losses. One $5000 loss so avoided would pay the additional fee for 1200 or 1500 such examinations, and the latent disease is vastly more common than that.

THE FALLACIES OF HOMŒOPATHY.

WE are glad to see under the above title an excellent article for lay readers in the March number of the *North American Review*. It seems more than likely that the relations between the regular profession and the homœopaths are again to be made the subject of a discussion which will probably excite popular interest and criticism. It is, therefore, well that through some channel the public should be informed of the essential teachings of the homœopathic school and of its proper position viewed from a scientific standpoint.

The difficulty which invariably presents itself at

the outset in arguments directed against homœopathy, is accurately to define and limit the so-called "system," which in both principle and practice is variously represented by its advocates, who in turns, twists, evasions, and sudden changes of base, are only equalled by the famous *pulex irritans* of the immortal Irishman.

It may, however, be taken for granted that a belief in one or all of the following propositions is essential to constitute a true disciple of Hahnemann, and that if they are all palpably untrue, and their falsity is capable of scientific demonstration, his followers must lie under the suspicion of being deficient in either mental or moral calibre:

1. That diseases are dynamic changes in a vital principle, or, in other words, are spiritual entities not depending upon material substances.

2. That the cure of disease is most easily and completely effected by drugs the therapeutic action of which closely simulates the symptoms of the disease itself; and that the probability of a favorable result increases with the exactness of this resemblance or similarity.

3. That the power of drugs increases with their attenuation, which may be carried to an almost unlimited extent.

4. That trituration or agitation confers new and augmented power upon the drug so treated.

To use their own expressions, we may say then that the doctrines of the "spiritual principle" of disease, of "*similia similibus curantur*," of "infinitesimals," and of "potentization," either singly or collectively, constitute the foundation upon which the teachings and practice of homœopathy rest, and without which there would be no such school of medicine, and no such class of practitioners.

If this be true, it becomes important that we should be able to state clearly and intelligibly the grounds for our disbelief in these hypotheses, and for our rejection of them, and repudiation of their exponents.

The daily press and the community at large are, as a rule, misinformed as to the situation, and are much inclined to applaud the mistaken efforts at compromise on the part of some of the regular profession, or to set down to bigotry and professional jealousy the admirable and unwavering resistance which, for nearly a century, that profession, as a body, has shown to this as to all other forms of quackery.

The absurdity of these dogmas is now generally recognized, and we need not at present repeat their refutation; but even in our own ranks there are doubtless some busy practitioners who, while convinced of the fallacy of homœopathic doctrines, and of the feebleness or insincerity of their upholders, and mentally satisfied with the knowledge of their universal rejection by impartial scientific investigators throughout the world, have neglected so to inform themselves as to be able to state explicitly and succinctly their reasons for holding these opinions.

On this account we have called attention to the above-mentioned article as affording a clear and fairly complete review of the subject, so written as to be within the comprehension of every intelligent reader.

A NEW DANGER IN ANÆSTHESIA.

DR. GEORGE FISCHER, in the *Deutsche Zeitschrift für Chirurgie*, 1881, vol. xv., p. 188, relates a case illustrating a curious and novel danger in anæsthesia which, so far as we know, has not yet been recorded. A patient with a compound fracture of the thigh suddenly died during anæsthesia from chloroform. The chloroform was pure, no food or mucus was found in the mouth, the tongue had been drawn well forward, and on the first appearance of serious symptoms, when but little of the anæsthetic had been given, artificial respiration and electricity had been used, but in spite of all and from no known cause the patient died.

The autopsy explained it all. A piece of chewing tobacco was found in the larynx completely obstructing the glottis. Hereafter not only must the operator remove artificial teeth before giving an anæsthetic, but he must see that a tobacco-chewer has none of the beloved weed hidden in any remote corner of his mouth. At the University Hospital, in Philadelphia, we learn this precaution is always taken, since in one case lately a patient nearly died from the same cause.

TRACHELORRAPHY.

"OF the beneficial results of the operation of trachelorraphy, I must candidly admit that I am not now so sanguine as at first." So says Dr. Goodell, and we think the judgment of most gynecologists, if founded on any wide experience, will echo the sentiment. Our opinions, as well as our coats, are largely swayed by fashion. When Emmet first emphasized the importance of lacerations of the cervix, trachelorraphy was to be the panacea for the ills of women, if we had judged from reports of the marvellous results obtained by over-sanguine doctors in all parts of the country. "But," adds Dr. Goodell, "I now know better when to operate, and this fact I have learned: That nervous exhaustion and spinal irritation will evoke symptoms which others, as well as myself, have referred to cervical tears, but which were in no wise dependent on these lesions."

The operation has its sphere, and is a permanent gain to our surgical resources. But it will not do everything. The ebb-tide has set in. In time we shall know just how much it will do, and how much it will not.

THE NEW YORK CODE OF ETHICS.

WHILE the New York State Medical Society by the adoption of its new Code of Medical Ethics has deliberately severed its relations with the American Medical Association and the entire profession it represents, its action does not seem to be received with enthusiasm by the New York State Homœopathic Society, to whose members it has extended the hand of affiliation. Dr. Talcott, in his Presidential Address before the State Homœopathic Society, at its annual meeting in Albany, referred to "the remarks made by Dr. Jacobi, President of the Allopathic Society, at its meeting last week, assuming that the homœopathic school was deserting its principles for the sake of affiliating with their brethren of the dominant school, which he said was dominant no longer, as shown by their offer to consult with their formerly despised brethren. What has wrought this? Has Mohammed gone to the mountain, or the mountain come to Mohammed?"

In view of the fact that the new Code of Ethics of the New York State Medical Society is in direct antagonism to the views which the Society has held, without expressed dissatisfaction, for over a quarter of a century, and to the long-standing code accepted by every regular medical society in the United States, the question may well be asked, Was not its adoption on the same day that it was presented and for the first time made public, and without the members having had the opportunity to learn the views concerning it, of the constituency they represented, both precipitate and unwise?

It remains to be seen how far the sentiment of the four thousand five hundred regular physicians of the State is correctly represented by the hasty action of the fifty-two gentlemen whose votes have given them this new code, and isolated them from the profession of the country.

In England the subject of consultations with homœopaths has attracted of late considerable attention in connection with the case of the late Lord Beaconsfield, and the views of the profession were recently formulated in the resolution passed by the Royal College of Physicians, which has already been published (see number for January 21, p. 86). In another column we reprint from the pages of the *Lancet* an admirable article on "Quackery within the Profession," which deserves the widest publicity. It is so timely, and deals so properly with the subject, that we are sure its perusal will afford gratification to every reader of THE NEWS, and it well shows, as is formally maintained by the Royal College of Physicians of London, how impossible it is for an *honest* physician to consult with any one who trades upon designations implying a special system of treatment.

THE TRANSACTIONS OF THE INTERNATIONAL MEDICAL CONGRESS, LONDON, 1881.

WE have just received by post the four large octavos containing the transactions of the late International Medical Congress in London, prepared by the Hon. Secretary-General, Sir William MacCormac, assisted by Mr. Makins and the secretaries of the sections. We are glad to write *Sir* William, for any one who was present at the Congress is well aware that the wonderful smoothness of its machinery and its successful results are due above all to the untiring energy and marvellous tact of the Secretary-General. Were any other evidence needed of the fitness of the honor conferred upon him it would be found in the wonderful celerity with which these volumes have been issued. In less than five months after the Congress adjourned its entire transactions are issued. What a labor this involved will be seen in the following facts. There are nearly 2600 royal octavo pages, containing 450 papers published in English, French, and German, with 858 speeches from the discussions, all printed in English. These had to be written out, often after translation, submitted to the speakers for correction, many of the papers had to be judiciously condensed (and some were even omitted, a liberty we commend to other Hon. Secretaries-General), proof had to be read and re-read, 180 illustrations had to be prepared, and after all this was done came the printing, binding, sending a circular to all the members and medical journals giving information of the publication of the volumes, modes of payment, etc., addressing each volume, and the transmission by mail. All this has been done, and successfully done, in less than five months.

Of the contents of the volumes we cannot speak at present, except to say that they are worthy of the occasion and the authors. Could we say more?

LEGAL PROTECTION OF THE PUBLIC AGAINST CONTAGIOUS DISEASES.

WE are very glad to see that the Philadelphia Board of Health have taken action in the matter to which we alluded in our issue of the 4th inst. They have recommended to Councils ordinances to prevent the spread of contagious diseases and providing for fines, as follows:

"Twenty-five dollars for the use of a public conveyance, without notification to the owner, by any person suffering from a contagious disease; $50 for a public funeral; $25 against any victim of a contagious malady for entering any public street car or conveyance; the same for selling any bedding, carpets, or household effects from an infected residence; and a fine of $10 for failing to state the cause in authorizing the publication of a death notice under similar circumstances; letting any infected house, or

room in such house, renders the offender liable to a fine of $100." Clearly as to the first item the fine alone is not enough. The carriage should also be disinfected by the medical officer of the Board of Health free of charge, and a fine of $25 should be imposed on the owner, if it be used again before such disinfection.

We hope that all of our city readers will immediately use their influence with the members of Councils from their various wards, in order to have these reasonable and eminently necessary provisions made for the protection of the community.

REVIEWS.

CHEMICAL ANALYSIS OF THE URINE, BASED IN PART ON (CASSELMANN'S ANALYSE DES HARNES). By EDGAR F. SMITH, Ph.D., Asa Packer Professor of Chemistry in Muhlenberg College; JOHN MARSHALL, M.D., Demonstrator of Chemistry, Medical Department, University of Pennsylvania. With illustrations. 8vo, pp. 104. Philadelphia: Presley Blakiston, 1881.

It is not always pleasant for THE NEWS to tell the plain truth about books that come to it for review. But we think it would be far better for both the makers and buyers of books, if candor always ruled its action. It must not be supposed, therefore, that we mean to be unkind in the present case, because we feel called upon to tell the plain truth about the little book before us. Our first comment is that its style is atrocious; for example (p. 50), ". . . Albuminuria such as is observed in Bright's disease, in nephritis, neoplasma renis. The so-called Bellinic casts, pus sediments in acid reaction and a small quantity of neoplasms even, always distinguish each of these troubles introducing albumen."

Again, it is very apparent that the authors have had but little experience in the practice of medicine. What they say about clinical deductions, is gathered from German authors, and very badly gathered at that. Again, their description of tests is confusing, inexact, incomplete, and sometimes erroneous. Had they taken the pains to ascertain, they would have found that the indigo-carmine test for sugar is worthless, as the characteristic reaction may be obtained when there is no sugar present.

Again, a proper acquaintance with uric-acid crystals, or with the German language, would have prevented their falling into the error of translating from Hoffmann and Ultzmann's book (without any acknowledgments) *Wetzsteinform* as "Wetzstein's form," instead of *whetstone-shape*. A similar blunder in observation and in linguistics occurs where another clumsy translation states that calcium phosphate crystals are "keel-shaped," whereas, the crystals are, and *keilförmig* means, wedge-shaped!

We have not had time to hunt up all the sources of the authors' information, but if the rest are as badly translated as the writings of Ultzmann, the poor quality of this book is easy to account for.

In the matter of illustrations, we find that, with one or two exceptions, the plates are inferior copies of those in the beautiful atlas of Ultzmann and Hoffmann, for which they themselves made the drawings, but which are here credited to Casselmann.

On the whole, it looks to us as though Casselmann had made too free use of Ultzmann and Hoffmann's work, and Marshall and Smith had made too free use of Casselmann's.

In conclusion, we regret to be compelled to say that this applicant for scientific favor lacks the most important qualifications of a guide to either the student or the practitioner.

1. TWO CASES OF VARICOCELE, WITH UNDEVELOPED TESTICLE, WITH REMARKS ON THE NATURE OF VARICOCELE; AND
2. A CASE OF ANTISEPTIC OSTEOTOMY OF THE TIBIA, IN WHICH RAPIDLY FATAL CARBOLIC INTOXICATION OCCURRED. By A. PEARCE GOULD, M.S. Reprint from the London Clinical Society's Transactions for 1881. 8vo, pp. 23.

Whether a varicocele causes atrophy of the testicle, or whether it merely prevents the development of the testicle, is a mooted point, with the preponderance of authority in favor of the causal relation of the varicocele. Yet those who believe that the testicle is not atrophied, have Sir Astley Cooper and Sir James Paget to appeal to. The difficulty is in the establishment of the real facts, *i. e.*, whether the testicle was originally small and undeveloped before the varicocele began; or, whether, having been of good size and firmness, it wasted after the appearance of the varicocele, and became flabby, etc. The statements of patients are, as a rule, so little to be trusted, at least on a point requiring exact observation, that the facts elude us in nearly every case. Mr. Gould's cases all seem decidedly to favor the view that the varicocele has prevented the development of the testicle. As to the cause of varicocele, he believes that, in many cases at least, it is not due to internal pressure and want of external support, but is a real venous hypertrophy. He suggests as a reason for it, that at puberty, when the testicle rapidly develops, there may be a transference of the developmental stimulus from the testicle to the veins. Mr. Gould does not seem to be aware of the paper of Dr. John H. Brinton, of Philadelphia (*Amer. Journ. Med. Sci.*, July, 1856), in which he asserts that there is no valve at the junction of the left spermatic and renal veins, and that this is one of the factors in producing varicocele on the left side, as the right vein at its junction with the vena cava has one. Mr. Gould states that in "all cases" he has yet examined on the left side, a valve has been found, either single or double. We are not disposed to support our American confrère against facts, but certainly our experience coincides with his.

The case of a simple osteotomy in which apparently death followed from cutaneous absorption of the carbolic acid, is certainly both curious as showing the intolerance of some people to the acid, and instructive as to the proper treatment in all similar cases—the immediate removal of the dressing.

ZUR KENNTNIS DER MIKROKOKKEN BEI AKUTER INFECKTIOSER OSTEO-MYELITIS; MIKROKOKKENHERDE IM GELENKKNORPEL. Von MAX SCHULLER, in Greifswald.

MICROCOCCI IN ACUTE INFECTIOUS OSTEOMYELITIS; MICROCOCCI IN THE ARTICULAR CARTILAGE. Reprint from the *Centralbl. für Chir.*, 1881, No. 42.

The presence of the lower forms of life in many diseases is now a question that is being investigated with far more than the former vigor. Lücke, Klebs, and others have found micrococci in the marrow of the periosteum and the surrounding soft parts; a fact that Schüller not only confirms, but adds to it the discovery of their existence in the articular cartilages, where they cause the destruction of the tissue, and give

rise to small canals leading down to the diseased bones.

The subject is well worth further study for its possible explanation of the septic results so often following osteomyelitis.

SOCIETY PROCEEDINGS.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, February 2, 1882.

E. L. DUER, M.D., PRESIDENT, IN THE CHAIR.

(*Concluded from page 198.*)

Death after Dilatation of the Cervix Uteri with a Laminaria-Tent.—Dr. B. F. BAER reported the following case: In September, 1880, I was asked by Dr. Ch. K. Mills to see Mrs. M. K. She was æt. thirty-two, and had had six children, the youngest having been born four years previously. The last labor had been tedious from uterine inertia, and was followed by a smart postpartum hæmorrhage. Since then she had suffered from a recurrence of metrorrhagia about every two weeks, lasting from a week to ten days, each time, and very profusely. The blood-loss was attended by severe uterine tenesmus. In the intervals between the hæmorrhages there was a constant mucous leucorrhœa. She complained of pain in the hypogastrium and back. Her appearance indicated anæmia and loss of flesh.

Physical examination elicited the following condition. The perineum was slightly lacerated and the vagina relaxed. The cervix uteri was large, soft from congestion, and lacerated bilaterally, with a swollen, everted, and abraded mucous membrane. The body of the uterus was hypertrophied and retroverted, with a slight flexion at the junction of the body and neck. At the point of flexion there was such rigidity of the posterior wall, probably from atrophy, that, when the uterus was replaced, it would return to its old position as soon as released. The sound passed three and a half inches, and proved the uterine cavity to be dilated, and its walls soft and rugous. The internal os, the point of flexion, was quite narrow.

This lady had received proper general medical treatment from her brother, who is a prominent physician, and from others, and during the year previous to coming under my care, she had received local treatment, but with no benefit, so far as the metrorrhagia was concerned.

I diagnosticated, as the cause of the hæmorrhages, a hypertrophied, granular condition of the endometrium, the result of subinvolution and retroversion of the uterus, with possibly a polypus.

The plan of treatment pursued was absolute rest, vaginal injections of hot water, reposition of the uterus by placing the patient in the knee-chest position and scarification of the cervix, followed by an application of Churchill's tincture of iodine once every six or seven days. Ergot and the tincture of nux vomica, with quinia and some other remedies, were administered internally. The constriction at the internal os made it difficult to medicate the cavity of the uterus properly, and it was thought more prudent to await the result of less radical measures. The result, however, was not gratifying, for the hæmorrhages continued to recur with as much, if not more, severity than before. I now introduced a laminaria-tent and allowed it to remain about twenty hours. I then removed it with some difficulty, for it was grasped firmly by the internal os, the contraction at which point it had failed to fully overcome. The canal was now patulous enough to permit me to pass the dull wire curette, with which I removed, very easily, a large quantity of hyperplastic or granular mucous membrane. But my patient's temperature was up to 100° before I removed the tent, and her general appearance indicated trouble ahead. It is sufficient for my purpose to state that, in spite of every effort to combat it, the temperature continued to rise and the case gave every evidence of septicæmia with metritis and perimetritis, and went from bad to worse, until death took place nearly three weeks after the introduction of the tent. Full precautions were taken to guard against septicæmia.

Why did my efforts to benefit this lady end so disastrously? Ought I to have waited, and given a further trial to less dangerous means of treatment? The patient had been in the care of a competent gentleman for a year before, and he had pursued that plan most faithfully, with no relief, and my own treatment of the case, before I introduced the tent, had continued over a period of two months, and with a like result; the patient was going downhill, and something more had to be done.

Was the result due to the use of the curette? I do not think so, for the material removed was soft and degenerated. It would have been bad practice to have allowed it to remain.

Should I have used a steel dilator instead of a tent? The tent was used for the purpose especially of softening the indurated tissue at the internal os. The steel dilator would not have done that; and it was very desirable that the os should be made patulous by softening of the tissues, so that the body would contract and disgorge the vessels in its walls. The steel dilator would not have fulfilled the indication so well, but it would have been a less dangerous means of dilatation.

Was the operation deferred too long, until, from the loss of blood, the vessels were eager to absorb any fluid which came within their reach, and the blood itself so disabled that it could not purify itself when poisoned? I believe that comes near the truth.

I do not report this case as an argument against the use of tents, but because I believe all such cases should be reported, so that we may not be led to regard dilatation of the cervix as a simple measure devoid of danger. This is the only case of death I have had to follow dilatation with the tent. I have never had a case of death follow dilatation with the steel instrument.

Dr. E. L. DUER described a method of preparing a sponge-tent expeditiously. Take a clean sponge of cylindrical form, dip it into melted wax or paraffine, and compress it into form as it cools. Tents may be introduced when the speculum and forceps are not at hand, by wrapping the string attached to the tent around the forefinger of the right hand, and inserting the thumb nail into the base of the tent. The first and second finger of the left hand are passed behind the cervix; the tent is then introduced into the os uteri, and the left hand being quickly transferred to the abdomen, counter-pressure is made and the tent forced home. Pain following the insertion of a tent is frequently the consequence of pressure upon the fundus, and if the tent be withdrawn about one-fourth of an inch, the pain will be relieved. The sponge-tent is, without doubt, one of the most powerful means for the reduction of uterine hypertrophy.

Dr. PAUL F. MUNDÉ agreed with Drs. Smith and Duer, that sponge-tents were indicated in uterine hypertrophy and granulations of the endometrium. He has never had any bad results from dilatation of the uterus by mechanical dilators of any form; but he has withdrawn very offensive sponge-tents after twenty-four hours' use, and feared danger might be near, and wished to avoid it. He can get tupelo-tents of any size; they dilate not too rapidly, but regularly and strongly, and he preferred to use them, as he was afraid of sponge-tents. He agreed with Dr. Smith as to the method of application. He always made use of three steps in the insertion of a tent. He placed the patient in Sim's

position. The cervix should be exposed properly, and seized by a tenaculum; then the tent being properly held in a strong forceps, is dipped first into a jar of liquefied carbolic acid, then into a jar of vaseline, and then rapidly passed into the previously cleansed uterine cavity; quickly, if the tent be not too large, for if there be any point for it to catch upon it will catch. At the end of twenty-four hours he always removed the tent, and they were very nasty sometimes. He always dreads some bad result, but has been fortunate so far, and has not seen any. He now uses the tupelo-tent, and treats it in the same manner that he previously did the sponge-tents. It is easily introduced, it becomes fastened in a few minutes, its effects are good, the patient does not complain of much pain, it does not imbibe so much as sponge, and does not sink into the uterine tissue as the latter does, but it is not so efficient in reducing the size of the hyperplastic uterus, for there is nothing else so good as sponge for that. After a tent is removed, the uterus should be thoroughly cleansed. In cases where the sponge was successful for the relief of sterility, a tupelo- or laminaria-tent would have probably done just as well. A sponge-tent increases discharge and causes local irritation, and its removal involves loss of epithelium, and for these reasons it is not generally so good for relief of sterility. As the sponge-tent is rough, it sticks, and is introduced with great difficulty, if it be of large size, in proportion to the calibre of the internal os. It is a maxim that a sponge-tent must not be introduced into a fresh wound, and does not the dilator or bougie cause a fresh wound? The sponge-tent is undoubtedly the best for hyperplasia, but all the other indications are filled by the laminaria- or tupelo-tents. He had experienced the same difficulty as Dr. Smith in the tapering-tent, and had, therefore, cut off the small end of the tent. A Molesworth dilator is open to the same objection in some cases, not dilating either os, but expanding largely in the space between; the conical-tent does the same thing; blunt sponges are very difficult to insert; the laminaria has dilated in the cavities of the cervix and body of the uterus with an hour-glass constriction at the internal os, and it was withdrawn with great difficulty. The tupelo-tent dilates more equally, and also more slowly. Sponge-tents are also hard to withdraw, and should be twisted before traction is made.

Dr. DUER suggested twisting in one direction only, allowing the grasping instrument to be drawn in by the shortening during twisting, until the tent was entirely loose. On one occasion, in his experience, a piece of tent broke off and remained inside the uterus, but it was extruded by uterine action, and was found in the vagina the next day.

Dr. J. CHESTON MORRIS had found out the uselessness of conical-tents, unless inserted in a reversed position; he prefers the cylindrical form. The cases of death from sponge-tents were probably due to the use of three successive tents, at intervals of twenty-four hours; he prefers to allow a tent to remain from forty-eight to seventy-two hours; he has never had any serious results, but in consequence of the tents being disagreeable and troublesome, he now uses Molesworth's dilator, and with great satisfaction; but they are badly made, they leak, and are apt to break under necessary pressure. In one case he burst three dilators before he succeeded in effecting complete dilatation. He agreed in the usefulness of this method of treatment for hyperplastic enlargement, and thinks that in many cases it acts in imitation of a miscarriage—expansion, then contraction with the aid of ergot will cure chronic metritis and enlargement. He is now using large soft-rubber stems to effect a similar purpose; they gradually overcome the resistance of the internal os and expand it. He has never used the tupelo-tent. In his opinion, it is far safer to allow a tent to remain two or three days than one only. In removing a tent, push in slightly at first, and then make traction with a curving motion. He thinks the position on the back far easier for introducing a tent than Sim's position. He has introduced tents in the manner described by Dr. Duer, without speculum or forceps.

Dr. MUNDÉ asked, Where should tents be applied? At the office? What should be done with the patient after the insertion of a tent? It is very reprehensible to introduce a tent unless a patient can be kept in bed for one or two days after the removal of the tent; this is a very important point. He is accustomed to introduce all tents in the Sim's position, and through Sim's speculum, and has not succeeded so well on the back because the tent easily becomes rough if not quickly pushed to its place. He introduces the sound, and frequently the hard stem on the back, pushing the uterus down over the stem by pressure above the pubes.

Dr. A. H. SMITH said that success in the treatment of sterility, by means of sponge-tents, depends upon the relation of the time of insertion to the menstrual period. If used just before the period, it dilates the uterus, and expends all its malign influence before the time at which the uterus is expected to receive the impregnated ovum. The tupelo-tent fails in fulfilling the indications, as it would not allow the flow to pass through it (unless perforated), and it could not pass beside it if large enough to be of benefit. He had commenced to use tupelo-tents when they were first introduced; he found them very spongy and soft, with slight dilating power, and easily constricted by the internal os; he did not find it to have any advantages over the laminaria- or sponge-tent. It has great powers of absorption, and had the appearance, when new, of having been used and dried again. According to Dr. Mundé, the tupelo-tents are much better made now, are hard, smooth, and have greater power.

Respecting the use of the bougie before inserting a tent. The bougie does not cause a tear or abrasion of the surface. The wax bougies are flexible, pointed, and graduated in form. He has never seen bleeding follow their use; he has never used a steel bougie. He considers that there is far less risk than from the use of mechanical dilators, of which he is much afraid.

There is no difficulty in introducing a cylindrical tent, as it dilates uniformly from end to end, and a smaller tent answers the purpose, as the important point is the internal os; that is where the largest amount of tent is needed. He prefers the position on the back, the relation of parts is more natural, and the uterus is more easily straightened by pressure on the fundus above the pubes, making introduction easier. Tents should never be introduced in the office; to do so is very reckless. The patient should be put to bed, and cleansing injections should be used.

On motion, the further discussion of mechanical dilators of the uterus was postponed to the stated meeting of March 2.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, February 16, 1882.

FORDYCE BARKER, M.D., PRESIDENT, IN THE CHAIR.

After various reports had been read and adopted, the PRESIDENT introduced the author of the scientific paper of the evening, Dr. A. A. SMITH, who proceeded to read his paper, entitled:

Clinical Observations upon Diabetes Mellitus, with Cases.

Detailed histories of five cases were presented, a summary of which is as follows:

First, all were cases of disturbances of the nervous system; in none was there injury or sudden

shock to the nervous system, but continuous mental strain; they all occurred in private practice, and among people exceptionally well-to-do. Second, all had disturbances of hepatic and gastric digestion. None had albuminuria, nor malaria, most were addicted to the use of alcohol. Two had a gouty tendency, three had none, and none had rheumatism. There was not great emaciation in four, it was great in one. None ever had any troubles with vision referable to the diabetic condition. None ever had any skin troubles either during the progress of the disease, or as a sequel. Hereditary tendency was traceable in only one, and that very remotely. There was in none any increase in appetite. In only two was there any great excess in the quantity of urine passed. Three gave a history of excessive thirst.

These cases, said Dr. Smith, seem to illustrate the necessity of selecting a plan of treatment and following it up persistently. The treatment adopted in all of the above cases was the same, and as follows: Codeia, one-fourth grain, gradually increased to one grain, three times a day, after meals. Also, the tincture of chloride of iron, twenty drops, three times a day, after meals, not increased. These patients were given a laxative pill consisting of aloes, nux vomica, rhubarb, and extract of hyoscyamus, sufficient to relieve constipation, which was a prominent symptom. They were furnished with a written diet list as follows: Vegetables, tomatoes, celery, cabbage, lettuce, cucumbers, pickles, spinach, radishes, mushrooms, cauliflower, asparagus, truffles, oyster plant, onions, watercress, olives, tea and coffee without sugar. Gluten bread made from the gluten flour of the New York Health Food Company, also almond-flour bread. They were allowed to drink as much water as desired, to take meats, fats, oils, cream, butter, poultry, fish, eggs, cheese, and permitted to drink milk. Of drinkables, brandy, whiskey, claret, burgundy, very dry sherry, the acid wines from the Rhine valley, were allowed. They were privileged to eat nuts of all kinds.

One patient was still under observation; four had entirely recovered. Of the four that had recovered, one had had no sugar in the urine for seven years, and three, none for two years. All had resumed their former occupations, and were as actively engaged in work as ever. Treatment was continued about four months after the disappearance of all evidences of sugar in the urine, and, for the most part, up to the present time the tincture of chloride of iron has been continued on account of the anæmia.

One of these patients was a lawyer, another a literary man; one, an artist; one, a railroad man, having charge of a large transportation business, and the fifth, a lady, living in her own home. Their respective ages were forty, forty-six, forty-nine, sixty, and sixty-three years.

The author of the paper was inclined to believe, admitting that diet probably played an important part, that codeia must also be given a very important place in the treatment of the disease. He referred to the fact that opium had probably been used since the second century, but he gave to Pavy the credit of having first suggested the use of codeia. Dr. Smith took the ground that certainly in the majority of cases diabetes has its origin in the nervous system. As an explanation of the good effects of codeia, he suggested its action as a direct sedative to the nervous system, not only in a general way, but to the pneumogastric nerve, accepting the theory that disturbances of the glycogenic function of the liver in diabetes was probably due to influences conveyed from the nervous system through the pneumogastric. He looks upon disturbances of the glycogenic function as entirely secondary. He has no sympathy with those observers that think codeia simply diminishes the quantity of sugar in the urine, and the quantity of urine, and has no permanent effect. Many cases are recorded apparently cured from the use of codeia, and now Dr. Smith adds four more, and one still under observation, with favorable progress thus far. He states there are probably many cases of diabetes mellitus which go unrecognized, and which, if treatment was begun sufficiently early, could be cured. In many instances patients affected with this disease did not seek the advice of a physician until organs were involved which made recovery impossible. Dr. Smith claimed that the fact that codeia acted beneficially in all these cases in which disturbances of digestion was a prominent feature, adds another argument to those already adduced in favor of a nervous origin of the disease; the explanation of this view being that, ordinarily, codeia produces slight disturbances of the digestive system, but in these cases its administration was immediately followed by improvement in digestion. The question was asked, Is it not probable that in cases of diabetes mellitus, in which emaciation occurs very rapidly, there is interference with the functions of the pancreas, either as cause or effect? Dr. Smith stated that in two of the cases related, he was much surprised upon examination of the urine to find sugar, and that probably the diagnosis in these cases would have remained obscure for some time longer if he had not conformed to his usual custom of examining the urine of almost every patient. The results of treatment in these five cases ought to encourage us to take a more cheerful view of diabetes than has been taken heretofore.

Dr. AUSTIN FLINT, Sr., responding to the request of the President to open the discussion, said, I am glad this disease was made the subject of a paper, for it possesses a good deal of interest as well as practical importance. Diabetes mellitus is either a disease of much greater frequency than formerly, or it is more frequently recognized than hitherto. I certainly have seen within the past five or six years almost more cases than in the whole of my previous life, and the number of histories that I have collected is so considerable, that I have decided to study them analytically, and make them the subject of a future paper. I suppose the disease was formerly very often overlooked, in the first place, for the reason mentioned in the paper, that examination of urine for sugar was not so common a practice as now, especially when there were no circumstances suggesting diabetes mellitus, physicians being contented to look for albumen and casts. Another reason is, that in some stages of the disease there may be no increase in the quantity of urine passed, or excessive thirst, or any other symptom to excite attention to its existence. I have met with several cases where the patient had been ill for a considerable time, and was suffering from some other disease, perhaps a fatal disease, at the time of coming under observation, in which an examination of the urine showed the presence of sugar. I could refer to several cases in this city in which, by a kind of accident, an examination of the urine was made without any fixed idea that this disease would be discovered, and it has been found to exist. I will mention one instance of this kind which occurred some time ago. A clergyman from another State, apparently in full health, came to me with this statement: "I want to state to you a symptom which I have, which may be the most trifling thing in the world, but it has given me some annoyance, so I have come to ask you about it." The symptom was a kind of itching in the penis, and to quote himself, "I have no confessions to make, but did not know but it might have some significance." At first I thought the matter was hardly worth while for consideration, but I finally made an examination of his urine and found it loaded with sugar. The patient recovered in a short time, and two years

have elapsed without a return of the disease. I, therefore, very strongly recommend the adoption of the plan referred to in Dr. Smith's paper, that of making an examination of the urine in all cases. I have seen a number of cases in which the quantity of urine and its specific gravity was not increased, and under these circumstances, not a notable degree of thirst. I am also glad to concur in the statement of Dr. Smith respecting the grounds for a favorable prognosis in a considerable number of cases of diabetes. I have notes of quite a number of cases in which the recoveries have been persistent. I have found that the dietetic treatment will cause the sugar in the urine to disappear or be reduced to a very small amount in a short space of time. In this connection, I will say that the important treatment seems to be dietetic, and I think that failure, in many cases, is due to want of thoroughness in its being carried out; I do not mean that patients do not rigidly adhere to the diet, but that the diet should be made to be satisfactory to the patient. My rule, for a considerable time, has been to give to these patients a list of every article of diet which they may take, and every article which they must not take, so that they can have it before them. If the physician be content with general statements, the treatment will be pretty sure not to be carried out. The great difficulty is in regard to bread; very few patients will eat bread containing no starch. They soon tire of it, and finally it becomes impossible for them to get along with it. I, therefore, give them an article which is not entirely free from starch, though it contains but little. This is prepared by the New York Health Food Company. With this they get along very well. If the matter of bread can be disposed of, the other articles of food are so varied that patients can make a satisfactory menu.

As regards medicinal treatment, I see from Dr. Smith's paper that he advocates the use of codeia, as recommended by Pavy. I have only used it as a form of opiate to relieve weariness of limbs, cramps, and insomnia. I have not depended on it for a cure. I suppose most present are informed of the remedy which has been suggested within the past few years, and advocated by Dr. Husted. I refer to the sulphide of calcium. I confess that I think he was led by his enthusiasm to overestimate the value of the remedy. Still, I have prescribed it in a considerable number of cases; and though I have not sufficient data from which to draw definite conclusions, yet I do feel that the remedy has a certain amount of curative power, and I commenced its use with a good deal of scepticism. I have used it in at least a dozen cases within the last eighteen months.

I will refer to one other point, and that is a toxical agency, in connection with sugar in the urine. I have met with several cases of this kind. The first was that of a gentleman from the South, who came to this city to purchase goods. He had diabetes, and his physician gave him a letter to me. Not feeling well enough to leave the hotel he sent the letter to me by a messenger, with a request that I call upon him. I did so, and found he had diabetes, but his general appearance was healthy. He had taken cold, complained of a sore throat, and had a little pharyngitis, but I did not attach the least gravity to his case. Afterwards he sent for me again, but it was not convenient for me to see him, and I sent my clinical assistant instead. My assistant soon returned, much alarmed, stating that he found the patient in a dying condition. I hastened to the hotel, but he had died before I reached there. I did not observe the symptoms in this case, and the only knowledge I have of them is a few general statements. It was certain that the urine was sufficiently abundant to eliminate the idea of death from ureamic poisoning.

Dr. Flint related the history of one other similar case, in which death occurred rather suddenly. Some attention had been given to this subject of late. He said there was certainly a liability to the development in this disease of some toxic lesion, which might destroy life in a very short time.

Referring to a favorable prognosis again, he said, I am cognizant of at least half a dozen persons in this city who have diabetes and who are in the enjoyment of comfortable health and doing laborious work, most of them finding it necessary to observe more or less strictly the dietetic treatment. With proper care and proper means, for it is pretty difficult for a poor man to carry out the treatment, I do believe, that by dietetics alone, in a certain number of cases, if not a complete cure, the holding of the disease in abeyance, will be effected, and the general health remain excellent.

Dr. HUBBARD was next called upon by the Chair, and remarked that he had seen several cases of diabetes, and now had two under treatment, one having been under treatment for four years, and the other for two. The dietetic treatment was being used in connection with the administration of yeast. In one case sugar had on several occasions disappeared from the urine. Both patients were ladies in easy circumstances, and had not had, to the Doctor's certain knowledge, any very great mental strain. The one who has been under treatment for four years is now in tolerable health. She had lost some flesh it was true, having been reduced from two hundred pounds to one hundred and seventy pounds. She is about fifty years of age. When treatment was commenced she was passing eight quarts of water. A tablespoonful of brewer's yeast was given three or four times a day. The case of a boy two years of age having diabetes was mentioned. Bicarbonate of soda was administered, but the patient died within a few months. None of the Doctor's cases had been cured, but some had been materially helped.

Dr. VIRGIL B. GIBNEY, being called upon by the Chair for his knowledge of the occurrence of diabetes in connection with organic diseases of the nervous system, said he knew of only one such case, that of a girl having infantile paralysis. In this patient diabetes did not develop until she was about fourteen years of age, at which time she had complete palsy of the right leg. She came of a decidedly neurotic family. She finally died of pulmonary œdema, but no definite connection between the diabetes and paralysis could be made out, and their co-existence was looked upon as an accident.

Dr. KINNICUT remarked that it seemed important to bear in mind that there are, apparently, two distinct forms of the affection. In one the patient can digest only a small quantity of sugar, and these cases can be readily controlled by strict dietetic treatment. In the other there is a serious diversion of the glycogenic function of the liver; and as these cases are never fully controlled, a guarded prognosis should be given. It is in these cases that very slight causes will produce that state known as diabetic coma, or collapse, in which the patient, almost without warning, passes into collapse, and dies.

Dr. PETERS had for many years adopted the view that the disease originated in the nervous system. Pricking the floor of the fourth ventricle would cause sugar to appear in the urine. Cutting the anterior roots would be followed by temporary diabetes. Cutting the posterior roots leads to a more severe and persistent form of the disease. Dr. Peters thought the basis of the disease was a vaso-motor paralysis in the severer forms, and a vaso-motor paresis in the milder forms. He had been in the habit of looking upon nux vomica as the best remedy. He had seen its use followed by benefit in a good many cases, and cure in some. He

concurred with Dr. Kinnicut in the view that in about one-half of the cases dietetic treatment was beneficial or curative; while in the other half, for the most part, only very slight benefit was to be derived from it. A strict anti-sugar diet might be adhered to, and all the symptoms go on. He thought in young children the disease was generally or frequently fatal. In advanced life it is milder, and much more amenable to treatment. In middle-aged subjects usually occurred the most serious cases. There were two large classes of patients. One, stout and obese; this class being quite manageable. The other, thin, nervous, and more or less debilitated, and very unmanageable. There were either two forms of the disease, or two stages, the first stage being manageable, the second stage being unmanageable.

The PRESIDENT alluded to a case, the history of which seemed to have some bearing on the etiology of the disease. The patient, a distinguished baron, distinguished as a poet, writer, and prominent member of the House of Lords, came to this country four years ago, bringing a letter of introduction from a most eminent physician of London, in which he stated the bearer had diabetes. The patient was seen the day after his arrival and was found excessively prostrated, and passing a large amount of urine—three or four quarts in the twenty-four hours. He was a very active man, a free liver, drinking abundantly of wine at meal-time which he supplemented with two or three glasses of water at bed-time. It was extremely difficult to restrict him to any diet, though he carried out the one prescribed to a considerable extent. He visited all parts of the United States, and during the time he was here the sugar in his urine diminished in quantity, and the quantity of urine passed became almost normal. He was permitted to satisfy his thirst by drinking all the water he wished. Since his return to Europe, Dr. Barker has had a long talk with his physician, who states that when his time is occupied with attendance upon great dinners, receptions, etc., he being very prominent socially, he very rarely suffers from diabetic symptoms, but after he has made a great public speech, as in the House of Lords, or has been engaged in historical or literary work, or bringing out a new edition of his poems, there would always be a great increase in the quantity of urine passed, and in the amount of sugar it contained. He would become excessively nervous and irritable. But after his intellectual work was finished and he resumed what we sober Americans might call dissipation, he apparently got well. He now enjoys pretty good health.

Dr. ALFRED C. POST inquired if any of the gentlemen present were informed as to the frequency of gangrenous troubles in connection with diabetes.

Dr. FLINT recalled to mind three cases of gangrene of the lower extremities in diabetic patients.

Dr. PETERS referred to a diabetic patient who received an injury to his great toe and died of gangrene.

Dr. WM. H. DRAPER said: I was unfortunate in coming so late as to be deprived of the pleasure of listening to the whole of Dr. Smith's paper; but from what I did hear, I judge he accepts the nervous theory of the origin of diabetes, and, it seems to me, we must all accept this theory when we consider the experimental researches made upon animals, and, also, when we consider the clinical history of cases of diabetes that come under our observation. There have been a very considerable number of cases of diabetes recorded as the result of traumatism of the brain, and in very many of the cases that come under the observation of the physician in his daily practice we can trace some nervous shock as the beginning of the disease. It would appear from the experimental researches, and from the clinical histories we have recorded, that the range of nervous irritation which will produce diabetes is extremely wide anatomically, and wide as to the cause of the irritation. But after all the liver appears to be the organ which is the chief instrument in the production of this disease. What remarks I have to make, sir, will be in regard to the association of diabetes with another form of disease, which is more common than diabetes, that disease which Bence Jones described as the "sour disease" in contradistinction to the "sweet disease." In other words, I think the clinical observations of most physicians will show that the great majority of cases of diabetes are associated with lithemia; that there is an error in the digestion of nitrogenous foods, as well as in the digestion of carbonaceous foods, in diabetic subjects. I think it can be shown that many cases of the grave form of diabetes, that form in which dietetic treatment does no good, give a hereditary history of gout, or have illustrated it in their own persons. It will be found, also, in these cases that there is not only sugar in the urine, but very often an excess of urea and uric acid. When we come to the consideration, however, of the milder forms of diabetes, the intermittent forms, I think this association becomes even more marked, because we can almost always in these cases trace in the individual some dyspeptic symptoms associated with gout, and we find in the urine, very frequently, deposits of uric acid and an excess of urea, as well as the presence of sugar. We shall find, also, in these cases, that the patients have been the subjects of true gouty lesions, of cutaneous lesions, of catarrhal lesions, of arthritic lesions. There is another circumstance in the history of these cases, which, it seems to me, goes to show the association of these two maladies, apart from hereditary influences, and apart from the occurrence in both of a similar kind of dyspepsia, in which there is an inability to digest any considerable quantity of carbonaceous foods, and that is, that diabetic and gouty patients are relieved by the same kind of diet, and by the same sort of medication. I think that those who have had much experience in the treatment of lithemia agree that a nitrogenous diet is the one upon which these patients thrive best, anomalous and paradoxical as it may seem to be. As to medication, I need only refer to the renown which alkaline springs have gained all over the world for the relief of both these classes of cases. Both classes of patients go to these places, and both get relief—victims of the sour and of the sweet disease.

I quite agree with Dr. Flint as to the importance of the dietetic management of diabetic patients, and think, until we can estimate the utility of medicines independently of diet, that it is not possible for us to exactly determine their value. I think it will be found that those medicines which have attained the greatest renown in the treatment of diabetes, outside of the alkalies, have been used in connection with dietetic treatment. Another point which I think bears upon the idea I have expressed, is the fact, that if we consider the different forms of medication used in the treatment of diabetes, we will find they are those forms more or less applicable to the treatment of functional disorders of the liver in gouty subjects. Aloes has already been alluded to as a useful remedy. Strychnia has been a remedy of great renown. Alkalies certainly have been of the greatest value in the treatment of the mild, and to a certain extent in the treatment of the severer, forms of diabetes. The cases which have been described by Dr. Smith certainly lend considerable support to the treatment by opium. With this remedy I have had very little experience, generally finding that diet would ameliorate the symptoms, and never having had any success or expectation of curing these cases, have not resorted to the use of drugs for that purpose. Dr. Pavy, I know, attaches a great deal of value to the use

of codeia, but Dr. Dickinson, equally distinguished, has not had the success attending its use that has been ascribed to it by Pavy. I have had some experience with the sulphide of calcium, and have been much pleased with the result, but never use it without prescribing a strict diet, and, therefore, cannot ascribe to it its true value. In the grave forms of the disease, where the patient manufactures sugar out of animal fats, I believe no treatment does any good. Here, I believe, we have a profound nervous lesion, what it is we do not know, which will prevent the utility of any medication.

Dr. SMITH, being called upon to summarize the remarks upon his paper, said: Mr. President, I shall have very little to say in closing the discussion. Although Dr. Draper was correct in supposing that I am of the opinion that the majority of cases of diabetes have their origin in the nervous system, I am not prepared to say that the disease may not have its origin in some organ in the body. Whether it is the liver that is first involved, and then the nervous system, or the reverse, I believe we have yet to find out. Since 1877, it has seemed to me, that in this direction, there are many observations to be made, and I look for the development of interesting facts in this line. I would say, then, I am not prepared to accept the idea that the etiology is always due to disturbance of the nervous system. I was somewhat surprised at the statement of Dr. Draper, that the same diet which would relieve diabetic patients would relieve gouty patients. I believe that gouty patients cannot digest meats as well as other patients. Diabetic patients can. The same is true, I believe, with other foods. I have no doubt but that diabetic patients and gouty patients are not able to take farinaceous foods, but, beyond that, I do not think we are able to trace the analogy.

In regard to codeia, I believe no one has touched upon the special point which I tried to make, that in grave cases as well as in mild cases, codeia was indicated. In those cases in which sugar is manufactured from food not containing sugar, or made from a meat diet, I contend that codeia places the nervous system in a condition in which sugar is not produced in such quantity. As bearing upon that point, I would call attention to the history of one of the cases contained in my paper, in which, though the dietetic treatment was continued all the time, when the codeia was withdrawn, the patient became worse, and improved when its administration was again begun. I admit that this is still almost theoretical, but it illustrates practically, at least to a slight degree, a point I have made theoretically.

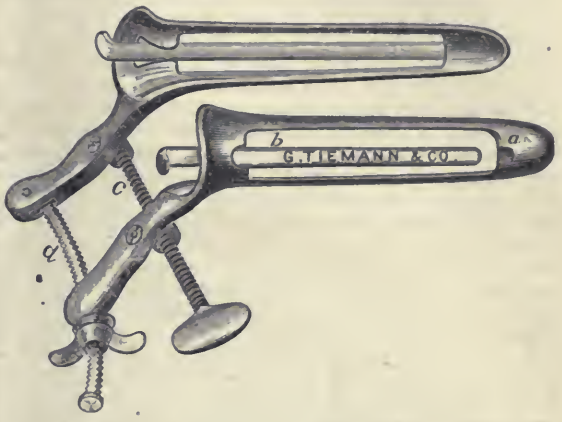
Upon motion, the Academy adjourned.

NEW INVENTIONS.

A NEW SPECULUM FOR THE RECTUM, AND ALSO FOR THE VAGINA IN THE VIRGIN.

BY W. W. KEEN, M.D.,
OF PHILADELPHIA.

I HAVE found the ordinary specula so unsatisfactory in the examination of the rectum that I have devised the present one to fulfil several purposes, and I have found it practically to answer admirably the objects I have had in view. The figure shows it of about three-fifths the full size, the length of the blades being three and three-quarter inches, the breadth, seven-eighths of an inch at the base. Placing the blades and handles in apposition, the blades are dilated at the base by the screw *c*, the ends remaining in contact and so forming a long Λ. This enables one to expose to view the anus and lower rectum, while the closed extremity prevents the escape of the fæces, unless they be very liquid. The value of this manœuvre in examinations for hæmorrhoids, fissures, and other anal troubles, or in any operations on piles is very obvious. If a lateral view of the rectum be desirable, one slide, *b*, or both may be withdrawn. *a* is a slot in which the extremity of the blade fits snugly when it is in place.



By screwing up the nut on the screw *d*, instead of *c*, the heel of the blades are a little dilated, but the chief dilatation is at the points. This will give a view of the rectum higher up. Or by using both screws, *c* and *d*, the blades may be dilated parallel to each other as in the engraving.

The small size of the speculum renders it admirably adapted for vaginal examinations in the virgin with the same variations in its manipulation as above described.

I must acknowledge the assistance rendered by Messrs. G. Tiemann & Co. in suggesting mechanical details which have improved this instrument.

CORRESPONDENCE.

HYPERMETROPIA IN THE PUBLIC SCHOOLS.

To the Editor of THE MEDICAL NEWS:

SIR: Any discussion of a medical subject which so widely affects the public interest as the condition of school life, must be, provided it be carried on with a spirit of fairness, both of interest and importance, and it is for this reason that I permit myself to add a few remarks to what has already been advanced.

I was sorry to see, from Dr. Randall's letter in THE MEDICAL NEWS, of February 4, that he was of the opinion that I meant to criticise Dr. Risley's work, published in the report on *Weak Eyes in the Public Schools*. This was not my intention, though if it had been, I had supposed that I was at liberty to do so. I certainly should have considered it a compliment if any work of mine had so impressed any of my colleagues, who had worked in the same line, as to render it worthy their serious attention and criticism.

This was not my intention, however; I merely wished to correct a statement which was not in accordance with the facts of the case, and one which Dr. Randall has himself characterized as loose. That it was a "loose statement" for a scientific paper, I do not think any one will deny.

Dr. Randall mentions the fact that I did not include in my list of foreign observers the statistics of Emmert (80.8 per cent.). This is true, for it was not necessary for the point which I wished to prove, but I am perfectly willing to do it now—and not only Emmert's enormous per cent. of 80, but also Scheiding's 25 per cent., and Koppe's 66 per cent.

This gives us eighteen foreign observers, and these

are all I know of. There may be others which I cannot find. If we add these to the former list, we then get as a combined result an average of hypermetropia equal to 21 per cent., or 1.5 times as much as my individual results; while, on the other hand, Dr. Risley's are nearly 3.5 times as large as the European average.

When, therefore, we see such tremendous discrepancies in the various examiners, for example, Dor, of Berne, 4 per cent., and Emmert, of the same place, 80 per cent., the conviction forces itself upon us that individual statistics are not of any value, and a great doubt arises in a candid mind whether the average of any and all are of any worth, so far as hypermetropia is concerned. When, moreover, we see such a careful and competent observer as Becker getting 12 per cent., and Emmert 80 per cent., the suspicion arises at once that the fault is not with the eyes examined, as much as with the method of examination. No one believes for a moment that when Dr. Derby and I get 13 per cent., and Dr. Risley 75 per cent., that there is six times as much hypermetropia in Philadelphia as in New York. Nor does this immense difference lie in errors made either on my part or on Dr. Risley's. I am quite sure if I had made my examinations in Philadelphia, I should have got a very much lower average, while Dr. Risley would have got a very much higher one here; and I feel quite convinced that some of the observers here would get 70 or 80 per cent. every time where I got 15 or 20 per cent.

These immense variations must strike an outsider, who is accustomed to look upon this branch of medicine as the most exact there is, as something preposterous; but, fortunately, it is not as bad as it looks, and depends mostly on the methods used, and the conception of what refraction really is, or rather what an emmetropic eye is. Strictly speaking, emmetropia is a mathematical point, and the slightest variation to either side of this makes either hypermetropia or myopia, and it is these small and trifling deviations which make the difference appear so large.

This brings me to a consideration of a point which I allude to all the more willingly as it was introduced by Dr. Randall, who observes in his letter that, while I give two of Cohn's examinations, where the percentage was 3 and 7, I omit his examination under atropia, where the percentage was over 88 per cent., "an omission no doubt accidental." On the contrary, the omission was intentional, as I should have been sorry to have made the mistake of comparing statistics made with atropia and those made without. The reason is that atropia always produces a temporary and artificial hypermetropia in the normal emmetropic eye, which, according to Donders, varies from $\frac{1}{100}$ to $\frac{1}{60}$. I alluded to this as long ago as 1866, and again in Philadelphia, in 1876, and Dr. Wadsworth, and Dr. Knapp, and others have called attention to it. Now, when we turn to Cohn's statistics in the original, we find that not only "was the percentage over 88," but that it was over 99 per cent., and that there was not a single emmetropic eye left. Cohn himself says, and he prints it in the largest possible type, "*Jeder scheinbare Emmetrop war nach Atropin hyperopisch*"—"Every eye apparently emmetropic was after atropia hyperopic." The only fair way, then, when atropia is used, is to discount the effect of the drug, and the question is what amount to allow for. I myself have taken $\frac{1}{60}$, which is about the medium between the extreme estimates made by Donders. It is supposed that this artificial hypermetropia is due to flattening of the lens; and this would appear to be corroborated by the examination made by Woinow, who found the radius of curvature of the lens of an eye, examined under atropia by the ophthalmometer, to be greater after its use than before. 9.74 mm. before, 10.10 after.

Then, again, some definite standard should be used. Dr. Derby and myself used, as stated in our work, $\frac{1}{60}$, either plus or minus, as the lowest variation from emmetropia which we thought would give an approximately fair result with school-children, and even then it often occurred that children with vision as sharp or sharper than the normal would still read Snellen xx. at twenty feet through $+\frac{1}{60}$, who were not hyperopic but emmetropic with the ophthalmoscope, and who, when tried, would always choose a plane glass in preference to the weak convex one. The mere fact that a young child sees xx. Snellen through a weak convex glass, does not show that it is hyperopic, as it may do this under weak circles of dispersion. Emmert himself says that out of his 80 per cent. "92 per cent. were hyperopic between $\frac{1}{72}$ and $\frac{1}{20}$, and that a great part, perhaps the greater part, are to be looked upon not as *pathologically*, but as *physiologically* hyperopic, and if we suppose a certain amount of negative accommodation, then a great quantity of the cases of *apparent* hypermetropia will be explained," and I cannot help thinking that this is the explanation of the phenomenal percentage that he and others get; and he further explains "that we have, therefore, an *accommodative* hyperopia, which should be distinguished from *actual* hyperopia—that is, *a departure from the normal form; a want of development.*" It was, I must admit, the actual, that is, a shortening of the axis, that I was after, and which I tried to obtain in my statistics, and I prefer to consider an eye which has no anatomical defect an emmetropic eye, rather than a "physiologically hypermetropic one," whatever that may mean. But some of my friends do not.

But to return to the standard. Emmert used $\frac{1}{72}$ as his limit. Cohn in some cases $\frac{1}{30}$, and in those under atropia, $\frac{1}{60}$. No wonder all his emmetropic cases showed H under atropia, especially as some of his children had a vision three times the normal, according to Snellen; a large quantity twice the normal; all over the normal except seven, and these seven the full amount. Dr. Derby and myself used $\frac{1}{60}$. It is not stated in Dr. Risley's elaborate report what standard he used, and no estimate can be formed of what the limit was, either by glasses or the ophthalmoscope.

Thus I would propose that when examinations are to be made in future, that some definite standard should be agreed upon, and that the effect of atropia, when used, should be accounted for, or, if not, then that every degree of error should be noted.

In my former letter I asserted that the same methods and same precautions were taken in Dr. Derby's and my examination and those of Dr. Risley. I find now that there was, however, a marked difference, for although the trial-glasses and ophthalmoscope were used in both cases, still they were differently employed. In my case, *every* eye was first examined with glasses, and its refractive condition noted, and then, without the result being known, it was examined with the ophthalmoscope. The two results were then compared, and if a discrepancy existed, a fresh examination was made, and in cases of any doubt, the preference was given to the glasses. This only occurred in very slight degrees. Thus, my results are practically a test by glasses. Dr. Risley's cases, on the contrary, were examined by the ophthalmoscope, and the refraction determined by that, with the exception that trial-glasses were used in doubtful cases. His results, therefore, are practically a test by the ophthalmoscope.

Now, as to the ophthalmoscope, with every incentive to look favorably upon it, and, while I consider it an indispensible agent in determining the nature of refraction, candor compels me to declare that I cannot consider the instrument as accurate a test as that by glasses. The "variables" are too many and too great

to make it, in my opinion, a safe guide when used alone in the lesser errors, a fact which I have always recognized and commented upon in various places, as, indeed, have others.

There are, of course, many things in Dr. Randall's letter which, were it of the slightest use, I might reply to, but discussions in regard to statistics, which seem to vary like the wind, are as endless as they are fruitless. I should, however, before taking leave of the subject, say that while I disagree in regard to the frequency of the occurrence of the various errors in refraction, notably the large amount of hypermetropia, I also disagree as to the phenomenal amount of conus in the normal as well as the abnormal eye. Thus, we find from table VI., in Dr. Risley's report, the percentage of conus, beginning at the enormous amount of 43.4 per cent. in emmetropic eyes, at eight years, and falling to 6.5 per cent. at seventeen; in the hyperopic eyes, from 41 to 22; and in the myopic, from 64 to 53. As conus is an anatomical change, the question arises, Where did the 37 per cent. of decrease in the emmetropic eye, for example, go to? It is stated that this frequency of conus, among other points, "was a genuine surprise to the Committee," and it certainly is to me, and I think will be to the ophthalmological world in general. Now, although there are these, and some other, points about which I disagree, there are many others, indeed most of the important ones, with which I not only agree, but to the truth of which, I, with others, have already testified at various times, in as an emphatic a way as was possible.

I am, respectfully yours,

EDWARD G. LORING.

NEW YORK, February 9, 1882.

NEWS ITEMS.

WASHINGTON.

(*From our Special Correspondent.*)

A MUSEUM OF HYGIENE.—The action of the American Public Health Association, which makes the Bureau of Medicine and Surgery of the United States Navy a permanent central repository for such material as may be placed in a museum of hygiene, promises to open up a new and important educational branch. Space has already been set apart for the purpose, directly under the control of Medical Inspector A. L. Gihon; and Surgeon-General Wales has recently issued a comprehensive circular asking for contributions and for the co-operation of all interested in sanitary matters, to make this attempt a success.

This undertaking represents another step taken in advance in the interests of technical education, so much needed in this country by the medical man, be he a graduate or undergraduate. The extent of ground which this museum will cover in time has, of course, not yet developed itself, but it is to be hoped that it will not be confined to the shutting up in glass cases of instruments that can readily be practically applied. Already the bureau has given us valuable and interesting practical work in this direction, of such a nature that it would not be just to refer to the labors of any one member of the corps individually; but the names of Gihon and Turner are most familiar to us at present, and Kidder can show us at the present site of the museum to-day valuable and interesting additions to the study of the atmosphere and its hygienic influences by his improvements upon and use of instruments for detecting the germs and spores of disease, and the permanent record of them by the aid of the photograph. This, coming as it does, coincident with the labors of the National Board of Health, and its reports from Smart, from Sternberg on the etiology of malarial fevers, and from Wood and Formad on diphtheria, taken together with the views regarding Listerism as expressed at the last International Congress, makes this branch of the subject at least of peculiar interest and importance.

All undertakings having for their object the teaching of the technique (for this word seems best to express it) of our profession would seem most to deserve encouragement in this country. Who knows but what the day may yet come when the ideal medical college will, by such means, be established; when the medical graduate receives his diploma, not because he has droned through three courses of lectures and crammed successfully at the last, but because he knows how to dissect, to make chemical and pharmaceutical preparations, to handle the apparatus of the physiological laboratory and record his results satisfactorily, to use the knife in surgical operations, and to diagnosticate and prescribe for living cases of disease, without reference to how long or how short a time he has taken to acquire this knowledge. Men may read of apparatus and study drawings without a clear appreciation of the same, which the handling and practical working of would give in a very short time. A man with a taste for practical applications in surgery soon learns how best to employ expedients, but not until he has seen the practical use of certain known instruments. And how many of our medical students really appreciate from what they pick up in a college course what all this talk of Pasteur, Tyndall, and others, about the germ theory, means? Their teacher in microscopy may show them bacteria and micrococci, and *perhaps* a few spores, but is not that all?

So, in answer to the cry from over the water of "fort mit Listerism," we would say "hoch" to the Museum of Hygiene.

DR. J. J. WOODWARD, with his family, sailed, on February 11, for Europe, with a leave of absence of eight months. It is his intention to go directly to Italy, and from there to Switzerland. A state of ill health, demanding serious attention, was necessary to force him to leave his official work upon the third and last volume of the *Medical History of the War of the Rebellion*, and to forego the pleasure of presiding over the coming meeting of the American Medical Association. Dr. Woodward has been abroad before for this purpose, but returned very much benefited. His present condition is said to be largely due to the constant strain and anxiety resulting from his attendance upon the late President during his prolonged and fatal illness.

Dr. P. O. Hooper, of Little Rock, Arkansas, as first Vice-President, will now become the presiding officer of the American Medical Association. He has been a member of the Association since 1875, is a member of the faculty of the College of Physicians and Surgeons of Little Rock, and was made a member of the Judicial Council of the Association in 1877.

BUFFALO.

(*From our Special Correspondent.*)

A STATEMENT has been going the rounds of the newspapers concerning the unhealthfulness of Buffalo, which is entirely without foundation in fact. The city is now, as it has always been, one of the healthiest towns of its size in the country. The mortality of Buffalo proper, is small, but some of its suburbs are in a very bad hygienic condition from the presence of slaughter houses, oleomargarine factories, and from cattle and pig-pens. In these localities, from four to five miles from the centre of the city, there is a good deal of disease from local causes, which the Board of Health is now trying to obviate.

INDIANAPOLIS.

(From our Special Correspondent.)

SMALL-POX has made its appearance in this city, two cases having been reported up to date. Stringent measures are being enforced by both the State and City Boards of Health, and the City Councils have passed an ordinance requiring every person who has not been vaccinated within the last ninety days to be vaccinated within the next ten days or be subject to fine. They also impose a fine upon any one having small-pox who does not hang out a red flag. An amusing instance of this occurred a few days ago. It was found that a case of small-pox was secreted on one of the principal streets and no flag was hung out. An order for the immediate arrest of the parties was issued, but the police were loth to serve it. The Mayor also thought it would be better policy to wait until the party recovered, rather than bring him out and subject the people to the contagion. A red flag is displayed at his residence now, but whether the family or the police put it up will ever be a mystery.

TYPHOID FEVER was not prevalent here as it was in other parts of the State, only a few cases having been reported. Its ravages were fearful in some of the rural districts. At Milroy, in Rush County, a town of three hundred inhabitants, about seventy-five cases appeared in the town in an area of two miles in diameter. Only six or seven cases died, however. Similar ravages are reported from all quarters of the State.

THE STATE BOARD OF HEALTH was fully organized January 1, with Dr. Thad. M. Stevens, Secretary and State Health Officer. The County Boards were also put in working order the first of the year. The Board issued an order that every person within the State must be vaccinated before the first day of February or be fined five dollars.

THE MEDICAL COLLEGE OF INDIANA has the largest class ever in attendance. The college building is new, and one of the best equipped in the West.

VIENNA.

(From our Special Correspondent.)

SURGICAL NOTES.—Prof. Theodor Billroth has recently returned from St. Petersburgh, where he was called to amputate the leg of Prince Czertkow. His fee was 15,000 florins, or about $6300.

Billroth has adopted the antiseptic method of Lister in a very modified form. He uses no spray apparatus, but in its stead floods the site of an operation with a 3 per cent. solution of carbolic acid in water. Instruments and the hands of the assistants are washed in a 5 per cent. solution. Catgut ligatures are employed. The universal antiseptic dressing for every form of wound is iodoform, in powder or gauze. This dressing was introduced into Vienna about one year ago by Mosetig and Johann Mikulicz, formerly Billroth's first clinical assistant and now privat-docent für chirurgie. The gauze is a coarse-meshed cotton fabric, deprived of vegetable oils; its meshes are filled with powdered iodoform, very much in the manner crinoline is treated with plaster of Paris to make a "plaster" roller.

"Immediately after the introduction of iodoform as an antiseptic remedy," says Billroth, "Viennese physicians and surgeons went to extremes and employed the remedy in large doses, internally and externally, for every form of disease and in every condition of life. Disastrous results, such as meningitis in children, albuminuria in adults, melancholia, febrile disturbances of serious character, collapse, at once appeared as the effects of this absurd practice. The remedy, then, was unreasonably totally rejected. Now, a healthy reaction in medical thought is setting in, and iodoform is assuming its proper position as a local antiseptic remedy, an invaluable adjuvant to carbolic acid—not, as König, of Göttingen, or Scheder, of Hamburg, says, a substitute." The odor of iodoform is well concealed by the bean, "tonka bona."

THE PUBLIC HEALTH.—The reports for the week ending February 18, so far as received, show the following returns of deaths from small-pox: Philadelphia, 17; Allegheny, 16; Huntingdon, Pa., 1; Montclair, N. J., 1; Cincinnati, 31; Milwaukee, 1. The disease has increased in Cincinnati, remained nearly stationary in Philadelphia, and decreased slightly in Hudson County, New York. Diphtheria is at present quite prevalent in Boston, 14 deaths from this cause being reported in the week ending February 18. In the same week there were 15 deaths from this cause in Philadelphia; 1 in Providence; 3 in Hudson County, New York; 2 in Cincinnati; and 1 in Milwaukee. Scarlet fever prevails in Hudson County, New York, there being 8 deaths reported there, against the same number in Philadelphia, 2 in Boston, 3 in Cincinnati, and 1 in Milwaukee. Typhoid fever caused 21 deaths in Philadelphia; 4 each in Cincinnati and Wheeling, W. V.; and 2 each in Hudson County, Boston, Richmond, and Milwaukee. One case of cerebro-spinal meningitis is reported from Milwaukee; and whooping-cough and measles are almost entirely absent from the mortuary records. No unusual prevalence of acute lung diseases is to be noted.

HEALTH IN MICHIGAN.—The reports to the State Board of Health for the week ending February 11, 1882, indicate that scarlet fever and tonsillitis have considerably increased, and that rheumatism, bronchitis, intermittent fever, diarrhœa, and neuralgia, have considerably decreased in area of prevalence. Special reports have been received, showing small-pox present during the week ending February 11, and since, at eleven places in Michigan, as follows: At Kalamazoo, Detroit, and Marshall, February 4; in Port Huron Township, February 5; in White Cloud, Newaygo County, February 6; in Kimball Township, St. Clair County, February 7; at Saginaw City (one case), February 7; at St. Joseph, on vessel (one case), February 11; at Spalding, Menominee County (eight cases, white), February 13; among the Indians at Indian Town, near Spalding (sixteen deaths and six cases up to), February 13; at Grand Rapids, February 14; at Parkville, St. Joseph County (one, convalescent), February 15, 1882.

HEALTH OF MILWAUKEE.—We are glad to learn that Milwaukee, although only 85 miles by rail from Chicago, with her death-rate of 134 for January, has had but 5 cases of small-pox.

THE NEW LIBRARY AND MUSEUM BUILDING FOR THE SURGEON-GENERAL'S OFFICE.—Dr. J. S. Billings, United States Army, in charge of the library of the Surgeon-General's office, appeared last Saturday before a sub-committee of the House Committee on Public Buildings and Grounds to-day and urged the necessity for a new building for the library, museum, and records of the Surgeon-General's office.

PROGRESS OF MEDICINE IN CHINA.—The late lamented Dr. Osgood completed, shortly before his death, a translation of Gray's *Anatomy* into the Chinese. He was threatened with brain disease for several months, and died suddenly while the work was passing through the press. As the Chinese have no ideas of anatomy, except what are purely conjectural, it was no simple task to make a translation, as special terms had to be introduced, and these again explained in a vocabulary.

Such a work will be of inestimable value to the native student, and have a tendency to open the eyes of others, in regard to the foolish conjectural teachings of their ancient sages.

Foreign physicians have now produced, for the Chinese, works upon anatomy, materia medica, chemistry, obstetrics, and several minor subjects. Dr. John G. Kerr, since his return to Canton, has entered upon the work left unfinished by Dr. Osgood, and is engaged, with the aid of two natives, who are all the time occupied, in making translations of other medical treatises.

Several physicians have recently arrived in China, to be located in Nanking, the Province of Canton, Swatow, and Formosa.

QUACKERY WITHIN THE PROFESSION.—The profession is probably unaware of the progress steadily made by medical quackery in its diverse forms and disguises. Quackery which is not medical—in the sense of being practised by duly qualified men—is undoubtedly an evil, but its consequences are not comparable with the effects of such quackery as is growing apace within our own ranks, and slowly it may be, but surely, undermining the respect and confidence which the profession has hitherto deserved and received from the public. We sometimes wonder that our calling does not command the warm recognition in certain quarters to which it seems entitled. For a sufficient explanation of this default in the estimation of society, let us look to the prevailing and almost daily increasing popularity of "systems" and "cures" tacitly, if not avowedly, supported or countenanced by the profession. There is a sentimental and mock-heroic spirit abroad which burlesques the candor of "truth-seeking," and even mimics the impulses of chivalry. We hesitate to condemn any system, "lest there should be some good in it," and we are too tender-hearted and polite to deal honestly by its promoters, even though we recognize the fallacy of their pretensions, and more than suspect their motives. This is not a faithful line of conduct in reference to our profession, nor is it loyal to science, which is one of the many constituent parts and aspects of truth. We know, or ought to know, that a perfectly just and truthful conception of the science of medicine must bar the recognition of *systems* and *cures* of any class or description. The art of healing is not a system, and can never be made one. It is simply an intelligent application of the laws of health in the remedy of disease. We study the "symptoms" of a malady with a view to the acquisition of precise knowledge as to its nature, course, and rational treatment. We pursue the investigation of disease over the boundary-line of death, and explore the cadaver with a view to ascertain the effect of the morbid state on the organism and to elicit its organic causes, albeit we too commonly confound effects with causes. We test the powers and analyze the constitution of drugs, and we scrutinize and make careful trial of methods of treatment, to obtain a reasonable acquaintance with their natures and actions. In brief, we take any amount of trouble and resort to every means at our disposal to render the principles and practice of our art *rational*. This is our duty, and it is the only method consistent with self-respect and professional integrity; but, if side by side with this policy, we cherish a spirit of credulity which renders us ever ready to countenance systems of which we can know nothing—because there is nothing to know—and take a false pride in showing friendliness to quacks and charlatans, the good work we ourselves may do is changed to evil by reason of the actual or implied sanction we give to the bad work done by others. Nothing is so much needed just now as the rise in our midst of a stern and uncompromising apostle of sincerity in science—a man of unpitying animosity to humbug in all its forms, who will not hesitate, at any bidding, to denounce wrong-doing and untruthfulness, let who may be the offender. It is time that a spirit of manliness went out in our ranks to chase away the lying spirit of mock courtesy—the faint-hearted and time-serving sentimentality—which makes us so ready to look kindly on any pretender, and so reluctant to expose any pretense.

There cannot possibly be a "system" or "cure" in medicine. There are no rule-of-thumb methods and no *mysteries* in true science. If we do not know what a remedy is, and how it acts, we have no right, as honest men, to employ it. The time has passed for the working of cures by charms and the recourse to nostrums. We pander to the credulity of the unskilled community when we show ourselves credulous. We patronize and encourage quackery when we extend professional recognition to a quack. Every man is a quack—whether qualified or unqualified—who employs a remedy without knowing why, or who adopts a "system" in medicine. The profession must speak out clearly and strongly on this point, and without delay. From the highest places in society to the lowest ranks of the people, there is just now a grievous readiness to "believe in" quacks and quackery. We have ourselves to thank for this most adverse "feeling" and "influence." It is the stirring of the viper we have brought in from the cold, where physicians and surgeons of more robust intelligence than those of to-day left it—the viper we have warmed and fed and brought back to life; and now it is preparing to rise and sting the hand that caressed it. The way to encounter the charlatanry which is making head against science is to be at once more candid and more conspicuously *honest* in our dealings with the public. We must lay aside the last vestige of the robe of mystery, and show by our words and works, our conduct and policy, that medicine is not a science that admits of inspiration, and that the practice of healing is not an art which can be acquired by the unlearned. There is no system or cure, or charm or nostrum, known to the profession; our calling consists solely in the rational study and treatment of disease on common-sense principles. For those who pretend to a sort of inspiration we have no professional friendship; and towards the promoters of systems and 'pathies we can have no leaning, or any feeling other than that of suspicion, if not pity and contempt. They can have no place in our professional intercourse, and we can have nothing to say to them or their work. This is the only sentiment worthy of the medical profession in its dealings with medical quacks, and the time has come when the revival of its old spirit is most earnestly to be desired.—*Lancet*.

HOMŒOPATHY AND THE BRITISH MEDICAL ASSOCIATION.—The Southwestern Branch of the British Medical Association does not, apparently, intend to allow the question of the relations existing between homœopathic practitioners and the Association to remain in its present unsatisfactory state. The subjoined resolutions were passed unanimously at the last quarterly meeting of the Branch, held at Plymouth, on December 31, under the presidency of Dr. Hudson, of Redruth:

"1. That this meeting desires to express its entire disapproval of the views, in relation to consultations with homœopathic practitioners, expressed by the readers of Addresses in Medicine and Surgery at the annual meeting of the Association at Ryde, in 1881.

"2. That this meeting desires to direct the attention of the Committee of Council of the Association to the resolutions in regard to homœopathic practitioners passed at the annual meeting of the Association in 1852, and reaffirmed at the annual meetings of 1858 and 1861;

and now calls upon the Committee of Council to put in force as speedily as possible By-law 3 against homœopaths and all members of the profession who assume designations implying the adoption of special modes of treatment."—*Lancet*, Feb. 4, 1882.

THE BURIAL-PLACE OF HARVEY.—The tower of the old church at Hempstead, in Essex, England, in which William Harvey is buried, fell down on the evening of Saturday, January 28, bringing with it nearly one-half of the roof and one arch from the south side of the nave, and letting down a good part of the roof of the south aisle. The vault in which Harvey lies is at the northwestern angle of the church, and is, consequently, uninjured. The church is supposed to have been built between the ninth and eleventh centuries. The medical profession of England and America are invited to subscribe towards the restoration of the building, which it is estimated will require about £5000. Subscriptions may be sent to Dr. B. W. Richardson, London.

VACCINE APPLIED TO SHEEP.—A Paris despatch to the London *Times* states that at a farm near Melun experiments were recently made by M. Pasteur in the presence of a host of specialists on the duration of the action of anthratic vaccine as applied to sheep. It will be remembered that six months ago M. Pasteur vaccinated a number of sheep with anthratic vaccine, the immediate result being to preserve all these sheep from anthratic virus, whereas sheep not so vaccinated succumbed within twenty-four hours to the latter. The question was how long the influence of such vaccine would last. The new experiments proved that it lasts six months, and they will be continued from month to month to ascertain the exact duration of the preservative. Four unvaccinated sheep were inoculated with anthratic virus, as also four of the sheep vaccinated six months ago. Two of the unvaccinated sheep expired within twenty-four hours, and the other two subsequently, whereas the sheep vaccinated six months ago admirably resisted the action of the virus. Another curious fact was ascertained. A lamb, the offspring of a vaccinated sheep, was inoculated with the virus. It expired within twenty-four hours, thus proving that the vaccine virtue is not transmitted hereditarily.

The Seine-et-Marne Agricultural Society presented M. Pasteur with a gold medal, and a banquet was held at which the great service rendered to agriculture by his discovery was warmly testified to.

MEDICAL DIPLOMAS IN FRANCE.—The six Medical Faculties in France have conferred the following diplomas during the school year 1880–81: The Faculty of Paris, 461; of Montpellier, 66; of Lyons, 44; of Nancy, 19; of Bordeaux, 18; and of Lille, 13. Total, 621.—*Med. Times and Gaz.*, Jan. 14, 1882.

HOSPITAL SUNDAY IN LONDON.—The collections this year amounted to $150,735, of which the Church of England gave eleven-fifteenths. All denominations—Jews, Greeks, Friends, etc.—are represented in the collection.

LECTURES OF THE ROYAL COLLEGE OF PHYSICIANS.—The following are the lectures of the Royal College of Physicians for the present year: Gulstonian Lectures, by William Ewart, M.B., March 3, 8, and 10, on "Pulmonary Cavities, their Origin, Growth, and Repair;" Croonian Lectures, by Sir Joseph Fayrer, K.C.S.I., M.D., March 15, 17, and 22, "On the Climate and Fevers of India;" Lumleian Lectures, by J. Burdon Sanderson, M.D., March 24, 29, and 31, "On the Pathology of Inflammation."—*British Med. Journ.*, Jan. 21, 1882.

OBITUARY.—Died, in Cologne, January 7, in the seventy-second year of his age, THEODOR SCHWANN. Schwann was born in Neuss-on-the-Rhine in 1810; was Professor of Physiology in Löwen from 1838 to 1848; and from 1848 up to the time of his death, Professor in Liège. With the name of Schwann, above all others, is associated the first conception of the cell-doctrine, the foundation and starting-point of modern physiology and pathology; and, although he distinguished himself in other work, it is as the founder of the cell-doctrine, as shown in his work on the *Structure and Mode of Growth of Plants*, published in 1839, that he will be remembered. From 1834 to 1839 he was the assistant of Johannes Müller.

— At Brooklyn, on February 12, THEODORE L. MASON, M.D., aged seventy-nine years. Dr. Mason graduated at the College of Physicians and Surgeons, New York, in 1825, and was for many years prominent in the affairs of the Long Island College Hospital, and of the Inebriate Asylum of Kings County.

— In this city, on the 20th instant, aged seventy-six, ROBERT BRIDGES, M.D., Emeritus Professor of Chemistry in the Philadelphia College of Pharmacy, and formerly President of the Academy of Natural Sciences, of Philadelphia.

NOTES AND QUERIES.

IS TYPHOID FEVER CONTAGIOUS?

To the Editor of THE MEDICAL NEWS:

SIR: Two months ago typhoid fever was imported into this village, at a time when there was not another case probably within five miles. Two weeks thereafter cases began to occur, first within it and then around it, now numbering about eighteen, and others are still arising. We have no other epidemic disease, nor have we had any recently. No other probable cause having been discovered, we desire to know whether it has been propagated by contagion.

Do the urine, and the perspiration, and the saliva, etc., as well as the excreta from the bowel of the patient according to Sir William Jenner, contain its specific poison? If they do, in what stage does it first appear, and when does it disappear? and are its poisonous properties destroyed by boiling water? Any information that you may give, and especially respecting its contagious nature, will perhaps be gratefully received by many of your readers. To invite the professional mind to repeated reflections on the character of a disease so universal and fatal, is to do no more than its importance requires. Very respectfully,

T. G. WITTEN.

TAZEWELL COURT-HOUSE, MD., Feb. 7, 1882.

[Our correspondent's case is instructive. The typhoid germs—probably contained in the excreta—admitted to the soil and ground water, became active, and hence the subsequent cases. Typhoid is a miasmatic infection, rather than a contagious disease. Some of our correspondent's inquiries cannot be answered in the present state of our knowledge. That boiling water destroys the vitality of typhoid-fever germs, seems highly probable.—ED.]

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 14, TO FEBRUARY 20, 1882.

MAUS, L. M., *Captain and Assistant Surgeon.*—The leave of absence granted him in S. O. 222, A. G. O., October 1, 1881, extended one month.—*S. O. 36, A. G. O., February 14, 1882.*

BANISTER, JOHN M., *First Lieutenant and Assistant Surgeon.*—Fort Reno, Indian Territory. The leave of absence granted him in January 1, S. O. 18, Department of the Missouri, January 24, 1882, is extended one month.—*S. O. 16, Military Division of the Missouri, February 15, 1882.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

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ORIGINAL LECTURES.

PURULENT OPHTHALMIA.

A Clinical Lecture, Delivered January 24, 1882.

BY OREN D. POMEROY, M.D.,

SURGEON TO THE MANHATTAN EYE AND EAR HOSPITAL.

GENTLEMEN: The disease of which I am going to speak to-day is ordinarily called purulent ophthalmia. Some authors speak of it as blennorrhœa, others as Egyptian ophthalmia, others again as military ophthalmia, and sometimes it is spoken of under the name of pyorrhœa, which name is used to designate the disease when pus is a more important constituent in the discharge than in the less dangerous varieties. It is of the same nature as catarrhal ophthalmia, it being a matter only of difference in degree between the mildest form of catarrhal conjunctivitis, and the most destructive form of blennorrhœa, or purulent ophthalmia. The disease is called purulent ophthalmia because one of its characteristic symptoms is the discharge of a considerable quantity of pus from the conjunctiva. It is one of the most dangerous diseases which affect the eye. This is owing principally to its liability to involve the corneal tissue, although it may be primarily a simple conjunctivitis. This disease differs from ordinary conjunctivitis in the fact that the ocular conjunctiva is more likely to be inflamed, and that to a greater degree than in any other form of the disease.

This affection may commence as a mild catarrhal conjunctivitis with a discharge that may be only serous, or sero-mucous, or it may contain a small quantity of pus at the outset. It is likely to develop and reach its acme in two or three days, progressing to this point much more rapidly than any other form of eye disease except diphtheritic conjunctivitis or perhaps acute glaucoma.

In one, two, or three days, the secretion will change from a thin serous, or sero-mucous, possibly containing a little pus, to the purulent form, when it shows all its characteristics. The amount of pus secreted is sometimes enormous. The redness of the conjunctiva will be much greater at the beginning than at this stage. The discharge in many cases is very much less in quantity in the early stage than afterwards. The conjunctiva may be intensely red, apparently almost dry and shining. This stage is exactly opposite to a later condition, where there is paleness of the conjunctiva, excessive discharge, and great relaxation of the parts. Photophobia and pain may or may not accompany the early stages of the disease, and is usually considered indicative of corneal complications. If there is no photophobia or pain, it has generally been considered that the cornea is free from disease. When the disease is fully developed, the discharge increases in amount, and becomes almost purulent. Do not always look for the appearance of pure pus, for if pus be mixed with tears, the latter will dissolve it in some measure, producing an appearance somewhat resembling the whey of milk, or as though oil and water had been mixed.

After two or three days, rarely in one day, the eyelids become exceedingly swollen, and they may be very red, shining, tense, and puffed out enormously; the swelling being largely a serous infiltration of the subcutaneous connective tissue. The swollen lid will naturally pit upon pressure, and thus become thinner. It enlarges in every direction, so that the upper lid will be pushed down over the lower one, overlapping it like a curtain. The lid will be so stiffened by exudation, that it will often be impossible to evert it. The conjunctival mucous membrane will exhibit the more characteristic qualities in a bad case of purulent ophthalmia. It will be enormously swollen, especially if it be the seat of true chemosis. The exudation may be of a lymphoid character. This being the case, the conjunctiva will not be as red as before, it will have a brawny appearance, and the cornea will only be visible as a cup-like depression. The retrotarsal fold will be pushed forward, and give rise to a tendency to eversion, especially of the lower lids, but sometimes also of the upper. Matters will go on in this manner for some days. The milder the case, the sooner changes for the better take place; the severer the case, the later. The signs of resolution naturally would be the diminution of swelling in the lids, subsidence of the discharge, and gradual disappearance of its purulent quality. If the swelling of the ocular conjunctiva continues for a few days, you will find, very likely, that the nutrition of the cornea is being interfered with. The first sign of this is a loss of epithelium here and there, giving the appearance of roughness to the cornea. What would be worse than this would be a little milky appearance, or slight opacity of the cornea extending in all directions, like glass that had been breathed upon. This opacity, after a little time, will result in ulcers, or, as Stelwag has said, herpetic efflorescences. This process may extend so as to involve a large portion of the cornea, and result in a complete slough; or, it may extend deeply into the cornea, perforating it, causing evacuation of aqueous, and the production of anterior synechia. This will sometimes have the appearance of a fly's head, when it receives the name of myocephalon.

The *duration* of the disease varies according to its severity and the constitutional peculiarities of the patient. From three to six weeks may be set down as the average. It frequently changes after a few weeks to the chronic form, when, as granular conjunctiva, either with or without the trachomatous condition, it may go on somewhat indefinitely.

The *causes* of this disease are the same as those of simple catarrhal ophthalmia. In the case which you have just seen down-stairs the cause was the blowing of cold air against the eye. Violent changes in temperature may produce it. If the perspiration be suddenly checked by the application of cold, the eye is likely to be involved. However, these cases are more likely to occur in warm weather. We have what are called epidemics of this disease, and they are more likely to prevail in warm weather; why they do so, I cannot tell. This disease has been called military ophthalmia, because, many times, when soldiers have been confined in barracks, and have been called out from a hot room to do duty on a cold morning, they have suffered from it. It is also called Egyptian ophthalmia, from its being produced by the reflection of light and heat from the hot sand, as well as the fact that the sand is blown into the eyes. Another cause is direct contact with a patient having the disease. If you take a little pus from an affected eye, and introduce it into that of a healthy one, it may give rise to an equally severe form of the disease, or to a milder form. This question is a little complex. At the New York Foundling Asylum I ob-

served that the same causes there would produce a mild case of catarrhal ophthalmia, and also an intense purulent ophthalmia, as well as acute trachoma, or almost any other disease of the conjunctiva. Pus, from a case of purulent ophthalmia, may produce a mild catarrhal ophthalmia, hence we must conclude that there is some peculiarity in the constitutional predisposition as an explanation of the fact. If patients are in a bad condition when poisoned, they are much more likely to be attacked by a dangerous form of inflammation. The element of struma, which you can put down as insufficient vitality and malnutrition, comes in to modify the effect of the disease. These, then, are the principal causes of purulent ophthalmia. There is, however, one other cause, that of diphtheria; for, after the diphtheritic membrane has been thrown off, the case may develop into one of purulent ophthalmia, and, in that sense, it may be considered as one of its causes.

The *diagnosis* of purulent ophthalmia is not difficult. The difference between this and other forms, you will remember, is, that a considerable amount of pus is found with this disease, while in the other forms there is little or no pus. In catarrhal conjunctivitis the discharge is mainly mucous; in purulent ophthalmia, it is more purulent. In the latter disease the discharge will sometimes cover the lid with a thin film, which has led to its being called membranous conjunctivitis. This form is easily distinguished from true diphtheria. In the former you can easily remove the membrane; but in the latter, not; it is thick, and extends into the substance of the conjunctiva; it is much more rapid in its course, and often likely to show its effects elsewhere. Swelling of the lids is quite a characteristic symptom of purulent ophthalmia, but should not be considered really diagnostic, as this is a characteristic of diphtheria. Another peculiarity of this disease worth remembering is, that at its very commencement, the ocular conjunctiva only may be principally involved. The colorless serous infiltration of the ocular conjunctiva in the early part of this disease is occasionally seen, and is of bad omen.

The *prognosis* is more unfavorable than that of any other eye disease, except, perhaps, diphtheria. This is owing to the tendency of the cornea to undergo destructive changes. Perforation may take place, and the contents of the eyeball be lost. Phthisis of the eyeball, or great shrinking of the capsule, is often a consequence of this disease. If this does not take place, we are likely to have opacity of the cornea. If some part of it is lost by ulceration, we may have anterior synechia, which may draw the iris to one side, so as to occlude the pupil. When the disease becomes very violent, we may have ophthalmitis, that is, essentially, an irido-choroiditis, and when severe, may result in phthisis of the eyeball, the choroid and iris being the principal source of the nutrition of the globe. These, then, are the principal complications to be feared in an unfavorable case.

I will go back for a moment to mention a phase of this disease. When, in its beginning, the ocular conjunctiva is principally involved, and there is considerable chemotic swelling, I think you can anticipate an unfavorable prognosis. No cornea can resist continuous swelling of the conjunctiva of the globe for more than a short time, as it interferes with its nutrition. The gravity of the case is largely dependent upon the kind of epidemic which prevails. In treating these cases in the Foundling Asylum, I met with so much success that I began to congratulate myself. But, to my astonishment, one fine summer's morning, I found several eyes nearly spoiled by perforation of the cornea; afterwards, naturally, my treatment was more cautious.

I remember a case which was under my charge a short time since, attended with but little pain, but there was a hard swelling of the ocular conjunctiva. I observed this for several days, and was fearful lest the cornea should be involved, but did not feel like resorting to heroic measures. After a few days the cornea began to be hazy at one corner; this slowly extended, and the eye was eventually spoiled (hopeless opacity of cornea, but no phthisis). One point which you should not forget is, that when a patient has had one ulcer of the cornea, do not be sure that there will be no other, for these cases relapse occasionally. At night is the time when relapses take place most readily. There may be one, two, or three relapses, which may end only by the destruction of the eye. An ulcer may perforate the cornea within a few hours, while you yet have the case under observation, and are treating it. Fortunately, this tendency to relapses only occurs in a comparatively small number of cases; these I would call *malignant*.

In early stages of this disease, the first indication for *treatment* is, the thorough cleansing of the eye. This is best done by the use of salt and water, a drachm to the pint. The eye may be washed with this solution, every two or three hours, usually as often as the secretion makes its appearance. Care should be taken not to irritate the eye by excessive handling. You may take what is called a silk sponge, or a piece of old linen saturated with salt and water; then, while an assistant gently separates the eyelids sufficiently to allow the eyeball to be exposed, the application may be effected. As the secretion is liable to be rolled up into minute masses, and even into elongated stringy particles, it will be necessary to gently wipe the part for their more thorough removal. In doing so, you should be careful not to harshly rub the conjunctiva, for fear of causing bleeding, as we are likely to have hæmorrhage induced by slight violence. If it is possible to evert the eyelid, you may do so, and frequently, in the superior cul-de-sac, minute masses of mucus, or mucopus may be found, which act as foreign bodies, and must be removed. If the disease does not promise to be of the severer variety, I would be careful, for a day or two, not to do too much to the eye. If there is considerable heat and swelling of the eyelids, it will be proper to use cold. For this purpose, dip bits of old linen into ice water, and apply them to the eye, changing them every three to five minutes; excess of water should be squeezed out of the cloth. This is the best method of applying cold, unless, indeed, you use a rubber bag containing water and pieces of ice. By the latter method, there is danger of producing an excessive degree of cold. In all cases, you should be careful not to push the cold farther than to moderately diminish the excess of heat. As soon as the lids are cool, remove the dressing, and wait awhile until reaction takes place, the object being simply to keep down the excess of heat during the inflammation. I think it a safe procedure in all these cases to use atropia. If you are fearful of irritating the conjunctiva, do not use it more than once a day, or just enough to maintain dilatation of the pupil. This will give you a diagnostic point as to whether the iris has become involved. I have been in the habit, latterly, of using a wash for purposes of disinfection. Carbolic acid, half a drachm to a drachm, to a pint of water, is as good as anything. The eye may be carefully bathed with this, three or four times a day. After a day or two, astringents may be cautiously commenced, but I would wait until the discharge has become fully developed. In the early stages there is very little discharge, and it is thin in quality. The conjunctiva is intensely red, and, perhaps, shining, a condition which would contraindicate the use of stimulants or astringents. We want to observe some relaxation before we are sure of the indication for the use of astringents, and this stage will be coincident with that of excessive discharge; that is, when the disease has reached its acme, or, perhaps, a little beyond that point.

Nitrate of silver is the most valuable remedy of the class of stimulants that can be used in this disease. As a collyria, you may use it of the strength of two grains to the ounce of water, dropped into the eye three times a day. If this is operating satisfactorily, the eye will experience a relief from its use, and the discharge will have a tendency to become somewhat thinner. Alum, a drachm to the pint, may also be used in the same manner, but it is of less value than nitrate of silver.

When the disease is fully developed, and there is great swelling of the eyelids, with chemosis of the ocular conjunctiva, producing the cupped appearance of the cornea, and accompanied by pain, the indications will be somewhat changed. While the excessive heat continues it will be indicated to use cold applications. At this stage it is nearly or quite impossible to evert the upper eyelids, unless it is done with such violence as to make it inadmissible. But excessive swelling of both the palpebral and the ocular conjunctiva is very dangerous to the integrity of the cornea, owing to the disturbance of its nutrition, consequent upon interference with the blood supply, consequent on pressure. What is the best manner of meeting these indications? In the first place I would suggest a canthotomy; that is, a division of the external canthal ligament. The incision should be carried well down to the rim of the orbit, the points of the scissors going somewhat upwards; at the same time you should be careful not to make more than a little nick in the conjunctiva. I would suggest first to make a slight incision through the whole thickness of the lid, then pass the points of the scissors outside of the conjunctiva, making a second incision, which shall extend farther. As the lid by this time will not be sufficiently cut away, you may pass the scissors between the conjunctiva and the skin, and cut away the ligament still more. For this purpose the scissors may be passed almost directly upwards, and by successive cuttings, while holding on to the lid with the fingers, you will soon find when the power of the orbicularis has been sufficiently weakened. The lids must needs be so divided as to give way under the pressure of the fingers; in other words, it must be pretty well cut off, in order to relieve this pressure upon the eyeball, which is doing so much mischief. This operation alone, I believe, has saved many corneas. I would not wait until corneal changes have taken place, for then it will be too late. If there is excessive swelling and considerable pain, and the swelling remains for two or three days, without any sensible subsidence, shall we scarify the conjunctiva? My present impression is that the feeling of ophthalmic surgeons generally is not to scarify as much as formerly. Should you, however, wish to adopt this method, you may evert the eyelid, and, by gentle strokes, with a sharp instrument, scarify the palpebral conjunctiva sufficiently to produce considerable bleeding. In scarifying the ocular conjunctiva I would use a little more care, the incisions should pass from near the cornea outward, in a radiating direction, otherwise too many vessels will be divided and the nutrition of the cornea jeopardized. If there is ulceration of the cornea, or opacity anywhere, will you do a paracentesis? Many authors are opposed to this operation in the acute stage. I am, on the whole, in favor of doing it in properly selected cases. The indications for operation would be the continuance of a considerable degree of pain, with commencing corneal changes, and increased tension of the eyeball (which you will find difficult to determine, as the swelling of the lids disturbs very much our judgment in this matter). I remember distinctly, some years since, an epidemic which occurred in the New York Foundling Asylum, of this city, in which, before my attention had been fully attracted to the severity of the epidemic, several corneas became perforated. After this I watched the cases with considerable care, and when a cornea showed a loss of any epithelium or any cloudiness, an operation was at once performed, and after that I do not remember to have observed the perforation of a single cornea. Paracentesis may be done every day or two, if necessary, but do not think that it will save the cornea after it has become considerably infiltrated. Certainly, if the cornea becomes cloudy *early in the disease*, you will despair of saving it, whatever you do. On the contrary, when it occurs during the subsidence of the disease, you may then expect better results from paracentesis. Together with paracentesis I would make a pretty vigorous exhibition of atropia, using a four-grain solution three or four times a day. If there are paroxysms of pain the atropia may be used every fifteen minutes until it has subsided, if this is possible. It will be proper, if our cold and atropia does not relieve the pain, to administer some form of an opiate. However, in this stage, when the corneal changes show signs of taking place, hot applications are acceptable, and may be used on the theory that heat is stimulating to the eyeball, and assists in maintaining its vitality. The hot applications may be made in the following manner: Small bits of rags, dipped in water, as hot as the assistant can bear, are wrung out into the eye. This plan, though very serviceable, is not quite so practicable as the dipping of rags into very hot water and laying upon the eyes, and changing them frequently. A small, thin, and light rubber bag, containing hot water, is a good method of applying heat, in the same way that it was used in applying cold. In this stage it is quite proper, in making applications, to continue to use those which afford most relief to the patient, barring one exception, hot applications. If the latter are applied continuously, for some time, they will act like a poultice, and produce a maceration or softening of the tissues, which may be accompanied by relief of pain, but are likely to facilitate the disorganizing processes.

If the cornea breaks down for a considerable portion of its area, the eyeball is destroyed. The lens is likely to be extruded, or if not, the cicatrix forming will cover so large a portion of the cornea as to make any future operation for visual purposes impossible. Moreover, it may develop into a staphylomatous protrusion which may give rise to a good deal of trouble. Naturally, if the lens is extruded with discharge of vitreous humor, or if there is panophthalmitis, you can only expect atrophy of the eyeball—phthisis bulbii. Although the disease does not always involve the second eye, it is liable to do so on account of the poisonous matter passing from the bad to the good eye. Hence it will often be proper to seal up the unaffected eye. This should be done in the early stages of the disease, before the formation of pus has shown itself to any extent. For this purpose, you may take a piece of absorbent cotton, and apply it to the eye; this is covered with diachylon plaster. A coating of collodion is now applied over the plaster so as to secure it to the skin, and hermetically seal the eye. A second coat of collodion is passed over the whole, and the dressing is complete. This may be removed daily, and the eye carefully examined. It will be well to wash the closed eyelids with carbolic acid, so as to destroy any poisonous material found on them. This is about the ordinary termination of blennorrhœa. It will either be soon well, or will go on into a chronic state of inflammation, assuming a condition known as chronic granular conjunctivitis, or even true trachoma. These conditions will require appropriate treatment. During the period of discharge and swelling of the conjunctiva, after it becomes possible to evert the lid, nitrate of silver may be applied to the conjunctival lining. From 40 to a 100 gr. solution should be used, sufficiently strong

to make an impression on the lid. If it is doing well, the discharge will become thinner and the swelling diminish; photophobia should not result from the application, and to protect the cornea, it should be carefully washed off with salt and water. In a later stage alum or cup. sulph. in substance may be substituted. As long as the good effect of one application continues do not repeat it, but even strong arg. nit. may sometimes be repeated daily, for two or three weeks. Do not continue one remedy after it seems to disagree with the patient, but change to another.

ORIGINAL ARTICLES.

THE VARIOLOUS DISEASES:

VARIOLA—SMALL-POX; VARIOLOID, AND VACCINIA.

History, Etiology, Clinical and Pathological Characteristics, etc.

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History.—The first accurate description of variola to be found in medical literature is that of Rhazes, an Arabian physician, who lived in Bagdad about the beginning of the tenth century. He maintains that Galen was acquainted with the disease, but he bases this statement on an erroneous translation. The writings of Rhazes on small-pox and measles have been translated for the Sydenham Society, by Dr. Greenhill,[1] and may, even now, be read with advantage. There was no word in the Greek or Latin languages for this disease. The term *variola* was coined out of the Latin *varus*, a pimple; or *varius*, spotted; and the first appearance of this word in literature was in the year 961. *Poc*, as the word was written originally, is Saxon, and signifies a bag or pouch; but it has since been written *pock*, or *pox*. In the fifteenth century syphilis appeared, and then *small* was added to *pox*, to distinguish it from the *big-pox*, or syphilis. The earliest reference to a disease, agreeing in its clinical features with small-pox, was in the sixth century, during which an epidemic of this malady appeared in Arabia and Egypt. The extraordinary social and political convulsions which attended the rising of Mohammedanism served to spread the disease through the surrounding nations. After Columbus, America was visited, and small-pox and gunpowder came into the continent with Christianity and civilization. The followers of Cortes introduced the disease into Mexico, and more than three millions of the people perished in one epidemic. After its first appearance in Europe, successive epidemics carried off vast numbers. In the eighteenth century thirty thousand died annually from small-pox in France, and about the same proportionate mortality obtained in Prussia and other European States. So universal was the prevalence of the infection, and so remote the probabilities of escape, that it became a proverb—"from small-pox and love few remain free." (Curschmann). Before the discovery of the protective power of vaccination, this disease, for several centuries, had been the terror of mankind. It was to be feared not only because of the immediate mortality, but the deformities and impairment of function which resulted in a considerable portion of the cases. The present epidemic, although sufficiently grave to cause uneasiness, does not compare in violence to the great epidemics which decimated the countries visited by them. In place of the terror, which formerly seized mankind on the approach of a small-pox epidemic, there is now a sense of security and protection felt by all those who have the wisdom to avail themselves of the immunity secured by vaccination.

Causation.—There is now no difference of opinion in regard to the existence of a contagious principle—a peculiar poison, whether an unorganized ferment or a minute organism—which, reaching the person of a susceptible subject, undergoes a process of multiplication, and develops the morbid complexus of variola. There can be no doubt, also, that the poison exists in the pus of the pustules in its highest activity. It would be more correct, probably, to say that the virus is most infective at that point in the development of the pustules when the clear fluid of the vesicles begins to grow turbid—when the vesicles are changing to pustules. There is, probably, no part of the body which may not impart infection. Emanations from the patient—perspiration and breath—contain the poison, but its activity is in inverse ratio to the distance. The stories told of contagion happening to persons who passed by the house or called at the door of a variolous subject, are largely apochryphal. Not less doubtful is that assumed keenness of scent possessed by some physicians who affect to smell small-pox from the street when the patient is in a remote upper room. The odor of a small-pox patient is peculiar, and some physicians have, it must be admitted, an astonishing acuteness in distinguishing it, when in the *immediate neighborhood* of the person affected. It is supposed by some that the odor is closely connected with the *materies morbi;* others maintain, and with more reason, that the odor is the product of the putrefaction of the pus and exhalations from the body, which have soaked into the bedding and clothing.

The susceptibility to the contagion of small-pox varies in different individuals, and is probably not wanting to any one. Negroes possess a special aptitude. The period in life of the maximum susceptibility is from the first to the fortieth year, but it may happen at any period. The disease occurs even in intra-uterine life, but it is exceedingly rare. A healthy mother has given birth to a child with small-pox, but it is more usual for the infection to take place from the mother, who is also affected with the disease, although it may be in an abortive form, which was not correctly diagnosticated.

The susceptibility to variola is usually destroyed by having an attack, but there are some examples of two, even three, seizures in the same person, but they are comparatively rare. Successful vaccination is not inferior to variola in the power to remove the susceptibility, but the questions connected with vaccinia are reserved for future consideration. The virus is conveyed by articles of clothing, paper

[1] A Treatise on the Small-pox and Measles, by Abeé Beer Mohammed Hu Zacarîyá Ar Rázî (commonly called Rhazes). London, 1848.

money, which were on or about the person during the disease. It may preserve its activity for a long time—for months, even years—when not freely exposed to the air. Those who handle rags are, as all the world knows, much exposed to contagion, and many are attacked. There can be little doubt that paper money is a frequent medium of communicating the disease, for few of those affected possess no specimens of the paper currency. At what period in the course of the disease the chances of contagion are most numerous, cannot be accurately stated. It is reasonable to suppose that the poison is most intense when the disease is at the maximum, but it is certain that infection may occur at any time, even during the period of incubation. The susceptibility of those exposed has a large influence on the result. Very singular experiences have been narrated in respect to the sensations felt at the time of exposure to small-pox contagium. A disagreeable and sickening odor, faintness, giddiness, and fright, have been experienced at the moment of contact with the virus. But such sensations are rare; usually nothing is felt or suspected at the time. A certain period elapses from the moment of acquiring contagion until the symptoms begin. This period is entitled

The Incubation.—Unconsciously to the affected person, in a majority of the cases, the poison works "an infection of the blood," multiplies or develops, until solids and fluids alike receive the impress of the taint. In a minority, the period of incubation is accompanied by a general *malaise*, by languor, mental and physical, restless nights, feeble digestion, and other evidences of illness. The duration of the period of incubation is about fourteen days for small-pox, but it is not a fixed period. It ranges from ten to fourteen days in most cases, but may be as short a time as five days. Some individuals appear to have a natural proclivity to small-pox, and in them the variolous germ affects all parts with great promptitude. The more intense the poison, probably, the shorter the period of incubation. A distinction has been made between the *incubation* and *invasion* period, the former extending from the reception of the poison to the onset of symptoms, and the latter from the initial chill to the appearance of the eruption.

Symptoms.—The invasion period begins when the incubation ends. From the first disturbance—the chill—to the appearance of the eruption, is an important period, sometimes called the *prodromic*, sometimes the *initial*, but which we prefer to designate, as the older writers have done, the *invasion period.* The chill with which the disturbance begins may be a violent rigor, or consist of a state of chilliness lasting several hours. The fever rises promptly, on the first day even, to 103° or 104° Fahr., and the pulse corresponds, attaining to 110 or to 140 per minute. Not to occupy space with minute details, it suffices to say that the systemic state is that of a high fever. There are, however, certain peculiarities of the invasion stage of small-pox which demand the most careful consideration. An intense, splitting headache, an equally severe backache, and rending, tearing pains in the extremities, especially about the joints, characterize the onset, and persist during the whole of this period. There may be violent delirium, and in children, convulsions. On or about the second day, but very irregularly in point of time, the peculiar *rashes* or eruptions of the invasion stage, make their appearance. These require attentive examination the more since they give rise to errors of diagnosis. Nothing is more common than to hear in the reports of society meetings, examples of the concurrent appearance and development of scarlatina or measles with variola, when, indeed, they were simply examples of these invasion rashes. They are rather exceptional than regular; are common in some epidemics, but are unknown in others. They have the aspect of a scarlatina or measles eruption, or they are petechial or hæmorrhagic, and sometimes these characteristics are combined, as petechiæ overlying the scarlatina exanthem. A further peculiarity of these invasian rashes is their arrangement. The erythematous are apt to be diffused over the body or localized to the anterior or extensor surface of the extremities and extend along in the form of a streak. On the other hand, the petechial rash is collected in certain regions forming triangles, and named from the expert who defined them, "Simon's triangles." The *crural triangle* is the eruption collected on the lower abdomen, the genitals, and the inner surface of the thighs, and the *brachial triangle* is formed by the eruption on the pectoralis, the axilla, and the inner face of the arm. An important aid to diagnosis is thus afforded us amidst the perplexing doubts which must arise during the invasion stage.

The duration of these rashes is variable; the erythematous disappearing in from twelve to twenty-four hours, and the petechial lasting several days.

The invasion stage exhibits other peculiarities. In a few instances, fortunately, the poison acts with deadly intensity; the blood is quickly decomposed, and death ensues before the eruption can appear. The disease, beginning in the usual way, but violently, is characterized by the occurrence of great prostration, by the appearance of an erythema on the body and extremities, and by subcutaneous hæmorrhages. Petechiæ and vibices flow into the erythema, and, whilst discrete on the extremities, form large, irregular figures on the abdomen and chest. Hæmorrhages take place under the skin of the eyelids; the conjunctivæ are intensely infected, and the face is swollen; diphtheritic exudations form in the fauces; albumen appears in the urine; hæmorrhages occur from the mucous surfaces generally, and the body emits a horrible fœtor, and has a dark-grayish or black tint. Such cases terminate in a few days, rarely continuing beyond the sixth day. This form of the disease owes its grave character to the hæmorrhagic diathesis—to the dissolution of the blood—and is, hence, styled *purpura variolosa.*

The Eruption Stage.—At, or soon after, the third exacerbation of the invasion fever, the eruption begins to appear. With the coming out of the eruption a great change occurs in the other symptoms. In many cases—especially the milder, discrete ones—

the temperature falls in a few hours to normal, or even below. In other cases, the fever remains at the maximum, or rises even higher, for twelve to eighteen hours after the eruption begins to show itself, when a gradual decline to the normal occurs in the less severe cases. In the severe corymbic, and in the confluent forms, however, and in the hæmorrhagic, the defervescence is slight, or there may be none. With the appearance of the eruption, also, there is a remarkable improvement in the condition of the patient. The severe pains in the head, back, and limbs cease; if vomiting has occurred, it is arrested; if there has been delirium, the mind clears.

The eruption appears first on the forehead and hairy scalp, and spreads thence over the body within twenty-four hours. The whole number of papules are out within two days. When each papule is perfectly distinct, and separated by a district of healthy skin from all surrounding papules, the eruption is said to be *discrete;* when the papules are so thickly placed that, although each is distinct, they come into contact at their border, the eruption is said to be *coherent*, and when they are merged together without distinction, *confluent.*

The eruption forms around a hair follicle or the orifice of a sebaceous or sudoriparous gland. At its first appearance, to the touch it seems like a bird-shot lodged in the skin, so well defined and hard is it. On the second day the eruption has a distinctly papular character, is larger and redder in color. On the third day of its existence the papule is still further enlarged; it now contains a pellucid fluid, which, for a day or two increases in quantity, becoming first cloudy then distinctly purulent. As the vesicle thus changes in the character of its contents, it also alters its form somewhat; a depression or umbilication appears in the centre, corresponding to the opening of a follicle or gland in the skin, but this is not invariable, for the umbilication still is present in the pustules formed elsewhere. Auspitz and Basch[1] held that the central depression is produced by the more rapid development of the periphery, and consequently greater accumulation of material in this part of the pustule.

The anatomical structure of the pock is an important and interesting part of the subject, for the nature of the pustule is the same whether the disease be small-pox, varioloid, or vaccinia. The first point to note is, that one incision, unless it include the whole circumference of the pock, will not evacuate the lymph. There are septa, which divide the pustule, and in the interstices of which the lymph is enclosed. The pock has, in fact, a cellular structure, a network of an epithelial character, which is well depicted in (Tafel vi., Fig. 1) the plate accompanying Auspitz and Basch's article, and reproduced by Curschmann.[2]

In about six days after the first appearance of the eruption, the pock is fully developed. If undisturbed in its development, it is then hemispherical in shape, with bevelled margins, and the central cup has filled up as the purulent contents have accumulated, so that the top is rounded off or *acuminated.* The previously clear lymph is now filled with pus corpuscles, and hence, the contents of a matured pock are purulent. The inflammation in the skin is not strictly limited to the site of the eruption. On the fourth day an inflammatory circle surrounds each pustule, and is known as the *areola.* It deepens in color and widens at the circumference, as the maturation of the pustule proceeds. Within this area the skin is hard and brawny, and more or less swollen, consequently when the pustules are thickly set there may be great deformity—as about the face—the features becoming indistinguishable in coherent and confluent cases.

The *maturation* of the pustules is no sooner completed than a process of drying and the formation of a scab begins. About the seventh, eighth, or ninth day of the eruption a viscid material exudes from the pustules, quickly dries into a yellow waxy coating; the contents also solidify, and thus a scab is formed. As the drying proceeds from the centre, the umbilication again appears. The formation of typical scabs may be prevented by rupture and escape of the contained pus and by confluence. When the crusts are detached, the place which they occupied has a dark, brownish tint, which finally disappears, the scar becoming paler ultimately than the surrounding skin. As very considerable sloughing may occur in some situations, especially about the face, very unsightly deformities will result.

The eruption is not limited to the external integument, but appears, also, on the mucous membrane lining canals opening externally, especially on the lips, pharynx, tonsils, and palate. Invasion of the larynx will be shown by the change in the voice, and the nasal passages will be obstructed when the pustules form in them. The vagina, urethra, and rectum are comparatively exempt, although not entirely so, the pustules being few in number and widely distributed.

The order in which the maturation and exsiccation of the pustules takes place, is that of the original efflorescence. The parts on which the papules first form are, also, the first to go through the successive steps in development up to the final desiccation and scabbing. Those parts occupied by the invasion rashes may be free from the eruption, but the same parts may be exempt when there were no preliminary eruptions.

We are now prepared to consider the various phenomena attendant on the development of the pustules—their maturation, desiccation, and cicatrization.

It is not difficult to conceive that such an extensive inflammation of the skin—such wide-spread suppuration—would induce the most severe disturbances.

Fever of Maturation.—When the lymph becomes purulent, the fever rises again into prominence. With the appearance of the eruption, the fever in discrete cases falls to normal; in the more severe coherent cases, declines notably, and in the confluent cases, merely lessens a little; but when suppuration occurs, the temperature rises in correspondence with the extent of pus production. The maturation fever

[1] Virchow's Archiv. Band xxviii., p. 337. Untersuchungen zur Anatomie des Blatternprozesses.

[2] Ziemssen's Cyclopædia, Vol. ii., p. 383.

is of the quotidian, remittent type, and the maximum heat ranges from 101° to 104° Fahr. The pulse has a frequency in conformity to the range of temperature, and fluctuates between 90 and 160, according to the age and sensitiveness of the subject. Various circumstances contribute to the disturbance. The burning in the skin, the soreness of the tongue and throat, the aching of the back and limbs, the headache and the wakefulness, make up a complexus of severe symptoms. It is not surprising that delirium should occur in many cases; sometimes it is of the ferocious kind, the patient becoming dangerous, jumping from the window and escaping into the street; sometimes it is of the low, muttering variety, and in the subject of chronic alcoholism it readily takes on the characteristics of delirium tremens. From the eighth to the twelfth day of the disease the fever of maturation is at its maximum. With the process of desiccation, it declines, by slow stages, the daily excursions of the temperature growing shorter, until, with cicatrization, the normal is attained.

With the drying of the crusts, usually, considerable itching is experienced, and injury is done by scratching if any additional inflammation is thereby induced, but not otherwise. At the site of the pustule, after the scab is detached, more or less pigment deposit gives a brownish appearance to the cicatrix. After some weeks these disappear, and gradually the scar assumes the well-known and characteristic appearance. The skin may be damaged in other ways. The hair follicles may be destroyed and the hair fail to be restored, but such a disastrous result is unusual. The nails, another appendage of the skin, may also be destroyed, but this rarely happens.

Course, Duration, and Termination of Discrete or Coherent Variola.—From the initial chill to the appearance of the eruption, is the invasion, initial, or prodromic period. The eruption comes out at or after the third exacerbation of the fever—from forty-eight to seventy-two hours after the rigor, says Gregory. The process of maturation of the pustules occupies from five to ten days, the average being about seven days. Drying, scabbing, cicatrization, and the falling off of the scabs, will occupy some days longer. About three weeks will thus be occupied in an uncomplicated case with the evolution, progress, and decline of the disease. Convalescence will be more or less protracted, according to the severity of individual cases.

The question of termination is so largely affected by the form of the disease and by the protective power of vaccination, that no general statement can afford any instruction. The period of the disease at which a fatal termination is most to be expected is, however, an affair of some moment. We find in a table of 163 cases of death given by Gregory[1] that the largest number of deaths occurred on the eighth day, the eleventh day coming second, and the ninth day, third, in the order of relative frequency.

So much depends, in the consideration of the variola question, on the number of pustules, and on a certain unexplained virulence of the poison, that we must not fail to pursue these topics. The former must be studied as it occurs in *variola confluens* on the one hand, and in *varioloid* in the other; the latter presents itself to us in the *hæmorrhagic variola.*

[1] The Eruptive Fevers, op. cit., p. 75.

VARIOLA CONFLUENS.

In this form of the disease we find the variolous poison most active and deadly. This characteristic manifests itself from the beginning of symptoms. It is probable, also, that the period of incubation is shorter. The initial chill is most violent, the headache and backache intolerable, and the limbs are torn with rending joint pains. The eruption struggles for an early appearance, and the fever is high, with feeble remissions. The eruption appears earlier than in ordinary cases, and it comes out almost simultaneously over the whole body. At their first appearance the papules are so closely placed on the face and hands that no part of the skin seems untouched, and on the second day are already uniting in large, flat vesicles. The skin by this time is much swollen, deeply red, and covered with patches of the confluent eruption; on the third day elevated into large, flat, sero-purulent bullæ. The face is especially the seat of the most complete confluence of the eruption, which here forms a large pustule, covering the whole and completely obscuring the features, which are further blended together without distinction by the enormous swelling. Elsewhere the eruption is closely placed, even coherent, but not confluent except over small areas.

The mucous membrane of the mouth, pharynx, larynx, and nose, is also the seat of a confluent eruption. Extensive diphtheritic exudations cover the tonsils, palate, and cheeks, and extend into the nose; the tongue swells enormously, and protrudes between the teeth, covered with large bullæ; the larynx is not only attacked by the eruption, but the cartilages are inflamed and necrosis ensues; œdema of the glottis occurs; a horrible fetor is emitted from the nose and throat; the submaxillary, sublingual, and deep cervical lymphatics are greatly swollen, impeding the return of blood from the head; swallowing is excessively difficult or impossible; respiration is labored and shallow, and the conjunctivæ covered with pustules; the cornea may be perforated.

The fever of the invasion stage ranges from 104° to 108°, even to 110° Fahr. When the eruption appears the temperature falls but a little, and as the pustules mature, rises again to the former point, or even higher. The other general symptoms are correspondingly severe; the pulse is small, rapid, and feeble; there are severe, often uncontrollable vomitings, and an exhausting diarrhœa may set in. Stupor and coma, or violent delirium, may occur in different cases; or, after active delirium, coma may supervene. In some cases the mind is perfectly clear until near the close. Albumen is present in the urine in a considerable proportion of cases.

Various complications arise in the course of confluent small-pox; intercurrent diseases, as endocarditis, pericarditis, pleurisy, and pneumonia, abscesses, sloughs, and gangrene, and cerebral de-

rangements from the pressure on the jugulars, and from albuminuria.

Course, Duration, and Termination of Confluent Variola.—As already indicated this form of variola is more rapid in its course than the ordinary form. Owing to the concentration and activity of the poison, the invasion fever ranges at the maximum (105° to 110° Fahr.), the eruption anticipates, and the temperatures lessens but slightly when the exanthem appears to rise soon to the maximum again. In the most severe cases the eruption scarcely appears, the skin is dusky red, and so greatly swollen that the features cannot be distinguished, the circulation is very feeble, the urine scanty or suppressed, and the mind wanders in a low delirium. Death ensues in such cases, as in those of purpura variolosa, from the profound changes in the blood, before the characteristic evolution of the disease can take place.

In other cases the termination occurs by exhaustion from the extraordinary range of temperature during the development of the eruption. With maturation and the extensive suppuration, pyæmia develops in some cases, and proves fatal. Others again are carried off, during the eruptive stage, by an acute œdema of the glottis. Sloughing and gangrene of the fauces, with diphtheritic exudations, swelling and black discoloration of the tongue, with deep-seated phlegmon of the organ, and a profound adynamia of the general system, are symptoms to which the older writers applied the not inapt term "black small-pox."

If the patient survive the various accidents and complications, he may succumb to the exhausting discharges, and to the abscesses and sloughs that follow in their wake. Although the mortality is large, death is by no means invariable. When recovery ensues, convalescence is necessarily tedious. Extensive losses of substance must be repaired, and in a large proportion of cases, permanent deformity, to a greater or less extent results from destruction of the cartilages of the nose, larynx, perforations of the cornea, and of the drum-head, etc.

VARIOLOID.

As variola confluens represents one extreme, so varioloid is the type of the other extreme. That varioloid is a distinct disease is a popular but an unfounded medical opinion. There is no true distinction between variola, varioloid, and vaccinia, for, as we will see, the anatomical structure of the pock is the same in each.

Varioloid is simply small-pox, modified by some circumstances, chiefly by the process of vaccination. Before the discovery of vaccination, however, there were occasionally encountered cases characterized by the mildness of the symptoms and the irregularity of their behavior. It is supposed that in such persons an insusceptibility to the variolous poison existed. At the present time, however, the chief cause of the extraordinary mildness and irregularities of many cases is the protective influence of vaccination.

The invasion stage of varioloid varies greatly in violence, but its severity is no measure of the gravity of the case to follow. The invasion rash—*erythema*—is of common occurrence in varioloid. As the regular eruption—it will be remembered—does not, as a rule, appear on those parts occupied by the invasion rashes, it follows that the more extensive the invasion exanthem, the less the number of pocks to appear. Whilst it is true that the erythematous eruptions of the invasion stage belong to varioloid, the petechial belong to variola. It seems to be true, further, that the better defined the erythematous rashes of the invasion stage of varioloid are, the milder the disease. A careful study of the eruptions of the invasion or prodromic stage is, therefore, necessary to make them available as accurate prognostic and diagnostic guides.

The invasion stage of varioloid may be shorter, but is more often longer than that of variola—often four rather than three days. The fever may be very considerable and there may be much headache and backache, but when the eruption appears, a rapid defervescence takes place to the normal temperature or even below it, and at the same time all of the pains and other distresses cease. The fever does not again appear, except at the period of suppuration, when it occurs in some cases briefly.

The eruption of varioloid does not pursue any regular order; sometimes beginning on the body, sometimes on the face, and now it spreads regularly over the whole surface; again, it appears simultaneously on all parts. The eruption itself exhibits similar peculiarities. The pock has the same structure as that of variola, and sometimes extends as deeply into the true skin, and leaves a distinct cicatrix; but more frequently it does not fully develop, or passes through the several stages of development imperfectly. The eruption of varioloid, when it goes through all the stages, begins as a small papule, and, in twelve to eighteen hours, assumes a vesicular appearance, sometimes with, often without, the umbilication. On the third or fourth day, the clear fluid of the vesicle is becoming purulent, and it is surrounded with an areola, but there is no swelling of the skin. The pustules dry by the fifth to the seventh day, usually without bursting; and the scab falls off very soon, leaving a slightly colored spot, which soon disappears. The number of pustules varies greatly, and, of course, according to the number of them is the severity of the disease.

HÆMORRHAGIC VARIOLA.

When a purpuric condition of the blood is associated with variola in its invasion or prodromic stage, we have that condition which has been entitled *purpura variolosa*. The variolous poison is then in its highest degree of activity. Before the exanthem can develop, the patient is moribund. *Hæmorrhagic variola*, however, is that form of the malady in which hæmorrhage occurs during the stage of pustulation. The debilitated convalescents from other diseases, and women in childbed, are especially liable to this form. It is characterized by the severity of the pains, the range of temperature, but especially by the occurrence of hæmorrhages into the pustules at various stages in their development, and from the free mucous surfaces. The hæmorrhage may occur in the papules before developing their vesic-

ular character, or in the vesicles on forming, or in the pustules after they are fully formed. The order in which the eruption is affected by the hæmorrhage varies, most frequently beginning on the inferior extremities. Sometimes a part of the body—it may be a very small part—is affected; sometimes every pustule is hæmorrhagic. The hæmorrhage occurs by degrees. Not only the pustules, but the skin generally, between the pustules contains ecchymoses and petechiæ. Large livid spots appear on the mucous membrane of the mouth and pharynx; extensive diphtheritic exudations form on the tonsils, palate, and cheeks, and the breath emits a most offensive odor. Hæmorrhages also take place from the nose, intestines, kidneys, and pregnant women abort with frightful hæmorrhage.

As regards the violence of the symptoms and the mortality from this disease, much depends on the extent of the hæmorrhages. If but a few pustules are hæmorrhagic the symptoms will not be so grave, and recovery may result. As a rule, however, this form of the disease is the most formidable, next to its cogener, purpura variolosa. The prognosis will be governed by the extent of the hæmorrhages, and by the consequent state of the vital powers. The more intense the fever, the more grave the case unless in those examples of low temperature and high pulse-rate due to hæmorrhage.

Vaccinia.

The vaccine disease occurs in the cow and horse, certainly; and probably, also, in other animals. Man is brought within its influence only by inoculation. It is a vesicular disease, specific in character, and has its seat on the teats and udder of the cow, especially of the milch cow. After a period of incubation, from three to eight days in duration, the udder appears hot and somewhat swollen, and papules come out on the udder at the base of the teats, and on the teats themselves. By the fourth day each papule has become a vesicle, and is distinctly umbilicated. The number of vesicles varies from one or two to ten or twenty, and in size they range from that of a large pin's head to a dime, the usual size being that of a pea. When allowed to develop without any obstruction, and not too closely placed, they are circular in shape; have a whitish, glistening aspect; and contain a transparent, viscid lymph. Around them is an areola, and the subjacent skin is hard and brawny. By the tenth or eleventh day the pustule is fully formed, the central depression has disappeared, the surface is conical and globular, and a quantity of yellowish lymph flows out on rupture. By the twelfth day desiccation has begun, and is completed by the fourteenth day, when the crusts are fully formed. The crusts are now of a dark mahogany color, and are detached about the twentieth to the twenty-third day. The anatomical structure of the vaccine pustule is the same as that of variola; it has the same cellular arrangement, the same umbilication, the same conoidal shape when the process of maturation is complete, and the scab has the same color and form when the separation finally takes place.

The vaccine disease may be artificially produced in the cow by inoculation, with lymph from other cows having the natural vaccinia, with humanized lymph, and with the matter of human variola. There seems to be no difference in the structure of the resulting pustule. The horse is also the subject of vaccine disease, which has all the characteristics of the same disease in the cow, and may be readily transferred to and developed in the latter animal.

What is the origin of the native vaccine disease? That it is the variolous infection which has been transferred to the cow in the process of milking, there can be no doubt. This fact was established as early as three years after Jenner's discovery, by Gassner, of Gänsburg.[1] It is true it is not always easy to effect the inoculation of cows with small-pox, but it can be done if proper attention be given to the details, and the resulting pustules have all the characteristics of vaccinia, produce the same results in man, and are equally protective against variola. The almost universal practice of vaccination must necessarily greatly reduce the number of cases of infection by this source. Vaccinia may, however, be transferred by the hands of milkers, and this is now the chief source of the natural disease. It is only at rare intervals, however, that cases of this kind are discovered. They have been a few times discovered in this country, but much of the virus used by American physicians had its origin in the Beaugeancy stock of France. Recently a case of spontaneous cow-pox has been observed by Dr. Landeau at Epines, France, and a number of heifers have been inoculated with success.[2] Cases of this kind should be observed with great care, and utilized for the production of the best stock.

There are but two methods of propagating the vaccine disease in cows for commercial purposes that should be tolerated. One is inoculation with variolous poison, and the utilization of the resulting lymph for the production of an abundant supply, by cultivation in carefully selected heifers. Against this method for producing genuine vaccinia has been urged the difficulty of inducing the disease. The highest authority on this subject, Mr. Ceely, of Aylesbury, England, has succeeded in inoculations of variolous lymph, and has produced therefrom a stock of vaccine which has been used in a large number of cases, and which has been proved to exert so perfect a protection that subsequent inoculation of variola lymph was without effect. The same results have been obtained by Badcock in England, and by Drs. Adams and Putnam, of Boston.[3] In Russia, Italy, France, and other countries, even in Egypt, this method has been successfully pursued.

The other method for the production of bovine virus, is the vaccination of carefully selected heifers with the lymph of the natural disease. It is probable that the proprietors of "vaccine farms," some of them, at least, use humanized lymph to procure the commercial "bovine virus" (retro-vaccination). Seaton says that this bovine virus "takes" more readily than the original vaccine lymph (bovine),

[1] Seaton's Handbook of Vaccination, Amer. edit., p. 57.
[2] Journal de Thérapeutique, No. 2, 1882, p. 63.
[3] Seaton, op. cit., p. 60–62.

but less kindly than the humanized, and that "papulation is usually retarded, the vesicles are often smaller, and the disease not really so well developed as by the stock from which the lymph was derived."

Has the lymph of the original Jennerian stock degenerated? Jenner maintained that if proper care was exercised in the preservation of the lymph, in inserting it in suitable subjects, its quality must always be maintained at the original standard. The stock now used at the National Vaccine Establishment (London), is the descendant of that supplied by Jenner, and preserves all of its original protective influence, and corresponds exactly in development to the vesicles figured by Jenner in his original work (Seaton). If it has thus preserved its proper characteristics and its activity for more than eighty years, it is not probable that it will ever change. Unfortunately for the good name of the Jennerian lymph—the humanized virus—so little care has been exercised in the preservation of lymph, and in the selecting of subjects for its propagation, that much spurious vaccine has been produced, and used with the confidence only appropriate to the genuine virus. It is not surprising that failure to protect should be alleged against such imperfect virus.

Bovine vs. *Humanized Virus.*—The question of the employment of humanized or bovine virus involves various considerations. It may be considered settled that genuine humanized lymph descended from the original stock of Jenner, retains the original characteristics as respects manner of development, and possesses the original protective power. There are several vaccine stations in England where this lymph is still used, and it is found to be equal in all respects to the original, and affords the same degree of protection. This fact established, it would seem then to be only necessary to employ such virus. Unfortunately many conditions have occurred to vitiate this matter. It is becoming increasingly difficult to procure unquestionable specimens from the original source. Furthermore, amongst the millions of examples of safe and successful vaccination, there have occurred some few instances of vaccinal syphilis. Probably not more than ten cases of such infection in regard to which no doubt can exist have ever been observed.[1] Other maladies have been reported thus caused, and various eruptions attributed to vaccination, but without reason. The eruptions and other affections due to vaccination will be alluded to further on. If the process of vaccination and securing of lymph were rightly performed, no contamination could occur. Unfortunately the blood and other fluids of syphilitic subjects are sometimes carelessly mixed with the vaccine lymph. The possibility of such contamination has awakened a widespread distrust of humanized virus, and so ready are parents now to attribute any kind of subsequent mischief or disease to the vaccine virus, that if anything occurs at any period afterwards, it is referred to the vaccination.

[1] The cases reported by Mr. Hutchinson have best withstood the criticisms justly made on all examples of vaccinal syphilis.

In consequence of the deterioration of the Jennerian lymph, by careless treatment, and the possibility of contamination by syphilis, bovine virus has come to be largely substituted. This substitution may, or may not be wise. It would be unnecessary if genuine Jennerian lymph were available; it may be desirable if the original vaccine disease furnish the lymph, whether occurring spontaneously or purposely by the inoculation of the matter of variola. It is questionable if bovine virus, from retro-vaccination, is the only source of supply.

There are certain peculiarities in the action of the original bovine virus, as compared with the humanized. It acts with less certainty. From the vast number of statistics on this point, we select those of Dr. Gibert, of Havre, who gives the results of vaccinations and revaccinations as practised at the Dispensary for Infants' Diseases with bovine virus from Milan, and from the French Society of Hygiene, at Paris, and with Jennerian vaccine.[1] Of infants, vaccinations with

	Cases.	Successful.	Unsuccessful.
Milan, virus of,	104	89	15
Paris, "	37	22	15
Humanized, "	64	56	9

Of revaccinations in adults with

	Cases.	Successful.	Unsuccessful.
Milan, virus of,	625	352	262
Paris, "	76	32	44
Humanized, "	27	19	9

These statistics correspond to the general experience of the most competent authorities. Bovine virus acts more powerfully, as respects the local phenomena and constitutional symptoms, and various papular and vesicular eruptions appear on various parts of the body more frequently than when the humanized virus is used. The crust tardily desiccates, and is detached comparatively late, leaving a deep, foveated cicatrix. The harshness and violence of action of the bovine virus declines by transmission through two or three subjects, and the vesicle improves in size and perfection of detail. Obviously, then, *the typical lymph is that obtained from virus three or four degrees removed from the original natural cow-pox, and transmitted through healthy infants.* It is admitted by all who possess any accurate knowledge of the subject, that humanization improves the original vaccine lymph. Only doubt intervenes in respect to humanized lymph, which has been transmitted through so many, that a lack of care in the selection of virus, and of the subjects receiving, may have vitiated the product.

Vaccination and Attendant Phenomena.—To offer observations on the subject of the manner of vaccinating, may seem a superfluity. So much carelessness, however, is permitted, and the consequences of carelessness are so tremendous, that we may be indulged whilst we set forth some general principles.

The skin must be scratched or scraped until the blood appears. If the blood flow freely, the virus

[1] Proceedings of the Académie de Médecine—Journal de Thérapeutique, No. 2, 1832.

should not be inserted until the flow has ceased; otherwise the virus may be washed out. Points of ivory, quills, or capillary tubes may be used. The lymph should be taken from the vesicle when its contents are becoming turbid. As soon as possible the points or quills should be used. The writer has vaccinated successfully with lymph contained in capillary tubes that had been put up in Germany and transported to the heart of this continent. The German method, which consists in mixing the lymph with glycerin, and storing in capillary tubes, is a good one. Crusts are much employed in this country. They possess the advantage of facility in handling and in transportation, but they are not so active and certain as the lymph taken at the most active period. It has been conclusively demonstrated that three or four points of insertion and resulting pustules are much more protective than one. The practice in Germany and on the continent of Europe generally, of inserting the virus at three points, is supported by an abundant experience. Vaccinators in this country, unfortunately, as a rule, puncture at one point only.

Whenever it is practicable, "arm to arm vaccination" should be employed. The vesicle at its most active period should be opened, and the lymph immediately transferred to the child at hand prepared to receive it. In this way the deterioration by storage and preservation is avoided.

As children are peculiarly liable to small-pox, vaccination should be performed at the earliest period—from one month to six weeks after birth in the case of a robust child, and at two or three months if the child is feeble. If exposure occur at birth, the child may be vaccinated as soon as born. It is a sound rule to vaccinate without delay all who are subjected to any special exposure. If delay may be allowed, a child should not be vaccinated if suffering from any acute disease, or from any chronic disease that interferes with the orderly development of the vaccine disease. Acute febrile affections, diarrhœa, and certain cutaneous maladies, as herpes, eczema, and intertrigo, especially, but including all affections of the skin.

Phenomena of Vaccination.—At the end of the second or third day after humanized lymph has been inserted successfully, a little papule has formed, which by the fifth or sixth day has developed into a vesicle, with an elevated border and a central depression, and having a bluish-white tint. By the eighth day after the insertion of the lymph, the vesicle is found to be full of a clear lymph just becoming a little cloudy; it is round, full, its margin elevated and its centre umbilicated; it has a distinct pearly tint, and an areola is forming around. This areola is an inflammatory ring, having a diameter of one or two inches, and rather hard and brawny, because of the swelling of the subcutaneous connective tissue. At this time, also, there is some feverishness, a coated tongue, and there may be, also, some nausea and diarrhœa. These constitutional symptoms may be slight, sometimes entirely wanting, but if absent, and no areola has formed, a suspicion may be well entertained that the vaccination is not genuine. The areola begins to fade after the tenth day. The vesicle which had developed into a round, convex pustule, begins on the tenth day to dry in the centre, restoring the umbilication, and by the fifteenth day a scab has formed. The scab, as it dries, darkens into a mahogany color, and is detached from the twentieth to the twenty-fifth day. A perfect vaccine scab or crust is round, with an elevated and bevelled margin, a central cup or depression, and has a dark-brownish or mahogany color. The cicatrix is often permanent, lasting through life, and it has certain characteristics by which the genuineness of the vaccination may be determined. It is circular, depressed below the general level of the integument, and distinctly foveated or pitted. When, in consequence of the manner in which the lymph is inserted, several vesicles form in such proximity as to coalesce, the scar will have corresponding characteristics.

Before vaccinating, if delay is allowable, an inspection of the ears and of the skin generally for patches of eczema, intertrigo, etc., should be made. In scrofulous children, so simple an irritation as vaccination, will excite cutaneous troubles, and the locality of the cicatrix may be the seat of strumous ulceration, causing protracted suppuration, enlarged lymphatics, etc. Erysipelas has been developed in some constitutions about the punctures, and spread widely, accompanied by severe constitutional symptoms. Eczema, if it be present in some obscure situation, may begin at the site of vaccination and extend over the body. Very violent phlegmonous inflammation, followed by swelling, and even suppuration of the axillary glands, may be caused by vaccination in some subjects. Much more often is revaccination followed by the accidents above mentioned.

As certain rashes occur during the invasion or prodromal period of variola, so eruptions appear during the course of the vaccine disease. In an address delivered before the Dermatological Section of the International Medical Congress, in London August 5, 1881, Dr. Gustav Behrend[1] gives a good account of the "vaccinal eruptions." He divides them into two groups: vaccinal local diseases; general eruptions. To the former belong the erysipelatous inflammations and eczemata of various kinds. As regards the general eruptions Behrend finds them to be rather rare. "In my position, as public vaccinator," he says, "among the three hundred cases which I vaccinated during the past year, I have observed them only six times." Roseola vaccinia is the only one which has been carefully described. It appears about the third to the eighteenth day, resembles measles strongly, is evenly distributed over the body and appears sparingly on the extremities, and lasts about two days. A second group of vaccinal exanthemata, consists of urticarial eruptions; and a third group of erythematous exudative processes. Also, a vesicular eruption, herpetic and eczematous, appear at various times. In the discussion following Behrend's paper, Prof. Hardy, of Paris, maintained that there are three kinds of vaccine eruptions: exanthemic, diathetic, and generalized vaccinia.[2] But Behrend holds that

[1] Archives of Dermatology, Oct., 1881, p. 383. Also, Edinburgh Med. Journal, Dec., 1881—a paper by Dr. George Thin, on same.
[2] Edinburgh Medical Journal, supra.

"a general vesicular eruption is, however, not a general eruption of vaccine lesions, not even when the vesicles resemble the latter in external appearance, and are developed simultaneously," and that they can be regarded as vaccine vesicles "only when it can be proved that their contents are inoculable, and capable of producing normal vaccine vesicles."

The appearance of vaccinal eruptions proves only that a foreign material is circulating in the blood of the affected individuals—the vaccine lymph. The eruptions of the second period must rather be attributed to the absorption of the contents of the pustules. (Behrend.)

Revaccination.—If carefully selected lymph, whether bovine or humanized, only were used; if every case of vaccination were carefully observed throughout, and repeated at the proper time if imperfect; if three or four distinct and sufficiently separated punctures had been made, it is probable that there would be less necessity for repeating the operation from time to time; it is probable, indeed, that the protective influence would continue during life in many cases. Revaccination may be necessary to supplement the original when imperfect, and to remove the susceptibility to the variolous poison which may have been reacquired. It is by a repetition of the vaccination only that the existence or absence of a susceptibility to small-pox can be determined. It follows that revaccination should be practised whenever the individual is exposed to the disease. In the absence of a special liability to contagion, there are certain periods when revaccination should be practised. These periods are: 1. After the second dentition; 2. After the period of puberty. To these should be added after the first dentition if but a single cicatrix remain, especially if not well foveated, and if faint. The influence of revaccination over the occurrence of small-pox is well exhibited in the statistics of armies. In the Bavarian army, compulsory revaccination since 1843 has been enforced. From that time to 1855 there had not been a single case of small-pox, and not a single death from the unmodified disease or varioloid. The returns of the French army are very striking. Before the year 1859, according to M. Levy (*Rapport sur les Progrès de L'Hygiène Militaire*, 1867), the ratio of deaths from variola and varioloid, per 1000 deaths from all causes, was thirty-nine. After new instructions from the Minister of War, requiring general revaccination, the proportion of deaths fell to 17.5 per 1000 deaths from all causes. This ratio was still further reduced so that, in the three years from 1863 to 1865 inclusive, it fell to 13.5 per 1000 deaths from all causes. In the Prussian army, since revaccination is enforced on all, epidemics of small-pox have ceased to occur. (Curschmann.)

Dr. Carpenter, the distinguished physiologist, has published some striking observations on the influence of vaccination amongst the civil population of England. "He shows that in the olden time, say from 1616 to 1780, the average mortality from small-pox was 4,483 per million; that with the discovery of vaccination, it fell to 2,040; with the provision of public vaccination, to 400, and under the compulsory vaccination system it had fallen to 276."[1] He showed further that the loss by death was but a part of the evil. Of those who escaped death, a considerable number were shockingly mutilated; he himself had seen 100 cases of blindness. In commenting on these statements, the *Lancet* further remarks, that "about 90 per cent. of persons in an unvaccinated community exposed to small-pox will catch it; from a third to a half would die, and the rest would be marked for life." And yet this is the state of society to which the bigoted opponents of vaccination would return.

The present epidemic of small-pox in this country means the neglect of vaccination, or its imperfect performance. A compulsory law, the provisions of which cannot be evaded, must be enforced in all the States, if epidemics are to be avoided. Unfortunately many foreigners, Germans especially, signalize their appreciation of their liberties by violent opposition to a measure enforced in their old homes by a vigorous and inflexible law. Others are content to be vaccinated by barbers, and no attention is paid to the source and characteristics of the virus. Revaccination is neglected. Until these abuses are reformed, epidemics of small-pox will recur from time to time, as new and unprotected material is produced.

[NOTE.—The writer of the foregoing has simply attempted to compile such facts as may be of interest at this time, when small-pox is so prevalent. He has not aimed at completeness, for a full account of the variolous diseases would take up a considerable volume. He wished more especially to lay before the readers of THE MEDICAL NEWS such points as may facilitate diagnosis, and clear up doubtful questions.—R. B.]

THE SURGICAL ASPECTS OF SMALL-POX.

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THE complications of variola which are of especial surgical interest occur during the eruptive stage, or appear as sequelæ during or after the stage of desiccation. They are almost without exception attributable to the presence and local irritation of the pustules, to a depraved condition of the blood, or to actual septicæmia, or pyæmia.

A full consideration of the various conditions included under these heads would extend far beyond the prescribed limit of this article; but it may possibly be of advantage, in view of the prevalence of the disease, briefly to mention those which have been found, by reason either of their gravity or their frequency, to be of the greatest importance.

The pharyngitis and laryngitis, which to some extent are almost constant accompaniments of the early stages, assume in exceptional cases an acutely œdematous, a suppurative, or a diphtheritic form, which rapidly proves fatal. Trousseau records three cases, in which, at about the middle of the second week, death occurred from suffocation, and so sud-

[1] The Lancet, February 11, 1882.

denly that no assistance could be rendered. In one a pustular inflammation below the glottis was discovered; in another there was œdema of the aryepiglottic folds, and a large abscess was found between the œsophagus and the larynx. In a child of twenty months, dyspnœa having necessitated tracheotomy, two false membranes were thrown out through the wound at the moment of opening the windpipe; and the autopsy revealed that the pseudo-membranous inflammation had extended to the larger bronchial tube. Rühle believes the essential peculiarity of the laryngeal affection to be a croupous or diphtheritic inflammation; and Mackenzie states that examples of this complication are to be found in the museums of St. Thomas's and St. Bartholomew's Hospitals. The histology of this complication is thus described by Cornil and Rauvier: "In confluent variola, the larynx, and, indeed, the mucous membranes of all the air-passages, are the seat of pustules more or less numerous. The pustules of the larynx have, generally speaking, the same form and evolution as those of the skin. When the pustules are very numerous, they unite into groups, and the epithelial layer, degenerating over an extended surface, forms a veritable false membrane, which, in certain cases, might be confounded with the false membrane of croup. After the shedding of the epithelium, the pustule continues to empty itself; the superficial layers of the mucous membranes may continue to suppurate; there is then formed an ulcer more or less deep and irregular." More severe inflammations, abscesses, and perichondritis have been observed towards the end of this process.

The treatment should consist, in the slighter cases, of astringent gargles, followed by scarification of the larynx, if œdema occur; in the more serious cases, where alarming suffocative attacks are met with, tracheotomy, at an early stage, offers the best, if not the only, chance for recovery.

The ophthalmia of small-pox, which is more destructive than that accompanying any of the other exanthemata, is usually confined to the lids and lachrymal apparatus during the eruptive stage, but may involve the cornea itself, or, more rarely, the other structures of the eye. The opinion that characteristic pustules form in these localities, though strongly opposed by some authors, still seems to be the prevalent one. A "secondary variolous ophthalmia" is described, occurring after complete desquamation, or even as late as the fifth or sixth week, and consisting of corneal abscess, followed by leucoma, or staphyloma.

Destructive inflammation of the bones of the nose has resulted from an extension of inflammation from the Schneiderian membrane, and profuse epistaxis, due to ulceration, has in a few instances either directly terminated the case, or has reduced the patient below the rallying point.

Particular attention should be paid to the condition of the tympanum, the middle ear, and the mastoid cells, as purulent otitis, followed by caries, has occurred. This complication, in young children, has been thought to cause death, and is undoubtedly capable of giving rise to coma, to convulsions, and to other grave symptoms.

Phlegmonous erysipelas of the scalp has proved fatal in a few cases, and, indeed, the association of profoundly vitiated blood with the intense irritation of the pustular dermatitis would seem to offer such favorable conditions for its development that its infrequency appears somewhat remarkable. It was, however, found to affect some portion of the body in forty-seven out of two hundred and eighty-seven cases recorded by Sargent in the *American Journal of Medical Sciences*, April, 1849.

A series of localized inflammations of subcutaneous cellular tissue, in the shape of furuncles, may follow the eruption; and in some reported cases there have been as many as eighty or a hundred boils upon the surface of the body at one time. Oftener they exist in smaller numbers, but follow each other in successive crops, extending over a period of months. This condition has been called a "furuncular diathesis," and is probably an evidence of a depraved state of the blood, which prevents healthy reparative action in regions more or less implicated in the profound dermatitis of the eruptive stage. A more dangerous form of extension of inflammation results in the production, during convalescence, of deep-seated abscesses, usually in the limbs. The progress towards health is interrupted by the usual symptoms of suppuration, rigors, fever, pains, etc.; and soon afterwards fluctuation develops often in the deeper muscular layers of the extremity involved. These collections of pus may occupy the ischio-rectal fossæ, and result in perineo-rectal fistulæ, or in extensive sloughing of the buttocks.

Œdema of the legs and feet is said to be rarer than in scarlatina, and more frequent than in measles.

At about the period of subsidence of the salivation, the dysphagia and the laryngitis, which occur soon after the appearance of the eruption, or, in other words, at a period corresponding to the height of the suppurative or secondary fever, we often have well-marked genito-urinary symptoms; intense ardor urinæ, vesical tenesmus, hæmaturia, orchitis, and acute hydrocele in the male, or ovaritis in the female. These complications have all been attributed to the occurrence of the eruption in the parts affected; but it seems probable, as the mucous membranes are, after the skin, the tissues pre-eminently involved in this disease, that the orchitis may often be, as usual, secondary to a urethritis.

That small-pox in its eruptive stage may, however, affect the serous membranes, as well as the skin and mucous tissues, was pointed out a century ago by Pedzholdt, who published his observations on variolous meningitis and peritonitis in 1832–1833. More recently—1859—M. Béraud called attention to these forms of orchitis and ovaritis, which affect not only the parenchyma of these organs, but involve the tunica vaginalis, producing the acute hydrocele above mentioned; or, by attacking the folds of peritoneum covering the ovaries, give rise to a circumscribed peritonitis.

Gangrene of the scrotum, or of the labia, has occasionally been seen, the loose, subcutaneous connective tissue of these parts, and their dependent position, favoring the rapid extension of the inflammation from the derm, and the arrest of the blood

current. Gangrene of parts exposed to pressure has also been noted very early in cases in which the blood was extensively altered.

Lymphangitis and buboes frequently occur during the acute stage, the inflammation of the glands often going on to suppuration, which, as in most similar cases, affects by preference the peri-glandular cellular tissue, but occasionally invades the structure of the gland itself.

Arthritis is a surgical accident of the secondary stage, which is far from uncommon. It belongs to the same class of joint affections as those occasionally complicating urethritis, lacerated wounds, puerperal fever, albuminuria, and scarlatina; but, like all the variolous inflammations, has an almost uncontrollable tendency to suppurative action, and, indeed, usually begins as a purulent synovitis. Extra-articular suppuration has occasionally followed, either by the extension of inflammation through the synovial membranes to the subcutaneous and capsular structures, or, as a result of purulent extravasation, from rupture of the synovial sac.

In such cases the patient will be left with sinuses discharging an ichorous fluid, with much limitation of the movements of the joint, and with a tendency to hectic, which may terminate the case fatally.

Periostitis, which is an occasional complication, shows the same tendency to suppuration, and is often followed by caries and necrosis either from the formation of a subperiosteal abscess, or as a result of a secondary osteitis. The latter condition is in exceptional cases the primary one.

Small-pox, like the other eruptive fevers, often so affects and interferes with the developmental processes of young children as to leave its impress upon the osseous tissues, predisposing to subsequent deformities or producing tardy or irregular growth.

In the dental structures this is easily noticed, teeth erupted during or soon after convalescence being marked with a series of parallel horizontal grooves, showing the failure of the nutritive supply during the period of the fever. These marks, of course, persist throughout life. It must not be forgotten, however, that, even if the variola occur some time before the eruption of the first permanent teeth—the sixth-year molars—that it may affect them and all those which follow. While the development of the temporary teeth is advancing, the germs of the second set are also progressing, and the occurrence of a stomatitis, such as small-pox invariably gives rise to, would of itself, exclusive of the general or systemic disturbance, be sufficient to interfere with the nutrition of the teeth, the blood-supply to which is at once vitiated and greatly diminished.

The necrosis of the maxillary bones, which sometimes occurs in children after the exanthemata, has been attributed by Mr. Salter to the influence of the fever poison upon the delicate tooth pulps, which, as dermal organs—portions of the tegumentary system—are especially affected by the diseases which chiefly attack this system.

Finally, septicæmia and pyæmia, followed by metastatic abscesses, occur during the *stadium maturationis*, and carry off a not inconsiderable proportion of patients. Ribes and Legallois have endeavored to show that the starting-point of the purulent infection in these cases is a capillary phlebitis, and, although this has not been conclusively demonstrated to exist in every instance, it seems exceedingly probable that it gives rise not only to many pyæmic manifestations, but also, through the production of embolism, to the sudden deaths which now and then occur during the height of the disease.

In the treatment of all these affections no deviation from ordinary surgical practice is required—abscesses should be opened when mature, local inflammations should be controlled in the usual manner, and gangrenous parts should be interfered with only after nature has entirely effected their separation. Treatment of special symptoms should, of course, be subservient to the general management of the case. A cardinal rule, however, is to avoid, under all circumstances, anything approaching systemic depletion, and to interfere surgically only when it becomes apparent that such intervention is necessary to save important structures, or life itself.

HOSPITAL NOTES.

THE PHILADELPHIA DENTAL COLLEGE.

HOSPITAL OF ORAL SURGERY.

RADICAL TREATMENT OF EPITHELIOMA.

(Service of JAS. E. GARRETSON, M.D.)

IN the treatment of epithelial cancer, Prof. Garretson urged as his experience that thorough removal of an affected part and its replacement by a flap brought from the greatest possible distance, had seemed to inaugurate a physiological change and arrest of development of the abnormal cells. Whether this was due, he said, to something approximating a condition which might be termed *force of example*, he would not at this time digress to consider, but would content himself with reference to the fact that for thirteen years he had practised the operation with satisfactory success on quite a large number of cases.[1]

The disease in the patient upon whom he was about to operate involved both eyelids of the right side, extending down upon the cheek, the contents of the orbit, the internal and inferior bony floor, both nasal bones, the perpendicular lamella, and cribriform plate of the ethmoid bone, and the internal angular process of the frontal bone. The gravity of the condition was self-evident. That epithelioma so related could scarcely fail to quickly prove fatal, could not but be admitted by all who were present.

The patient was, however, as yet rugged, with the bloom of health, and without signs of cachexia. The danger attending such an operation as was required, was fully understood by the man, who was most desirous that the attempt be made to save him. Humanity's and the patient's sake both impelled the lecturer to undertake the operation, which he proposed should be the plastic one referred to, as it offered the only possible chance of life to the individual, while at the same time it was an extreme example to distinguish the promise and capability of the means of cure.

After etherization was completed a section was made over the frontal prominence and carried down the nose to the ala upon the right side; thence across that cheek

[1] See his System of Oral Surgery, also the last edition of Dr. Duhring's Treatise on Diseases of the Skin.

to the angle of the jaw, from whence back to the place of departure. The soft parts included in these boundaries were then dissected out, including the right eye and its appendages, and the bony parts previously mentioned were removed, as they proved upon examination to be involved in the disease. For this purpose the surgical engine armed with an oval burr was used, proving a most efficient and valuable machine, capable of the most delicate and trustworthy work. It was claimed that the burr was revolving at the rate of fifteen thousand times per minute, and yet the operator was exposing the olfactory bulbs of the brain.

The abnormal tissue being entirely removed and the severed arteries secured, the integuments across the temporo-zygomatic region were separated and dissected up slightly to beneath the ear, in order to form a wide groove along which the flap could be laid. A great flap with a pedicle of one and a half inch in width was now taken from the integuments beneath the right ear extending down to the scapula, being about seven inches in length, having an enlarged termination of some four inches across. This flap was then turned and stitched into the margins of the skin about the ablated parts.

Three days later a crucial incision was made into the part overlying the orbit and the four ears thus secured were worked around the circumference of the cavity and retained in their new position by a conical-shaped sponge compress supported by a monocular bandage.

Three days after the operation the patient was sitting up in his bed reading with his single eye.

MEDICAL PROGRESS.

ALCOHOLIC INTOXICATION.—In the blood of animals in a state of alcoholic intoxication a notable quantity of alcohol was found by Lallemand, Perrin, and Duroy. The method which they employed was to draw from the carotid artery a considerable quantity of blood, to distil this in a salt bath, and to redistil over quicklime. M. GRÉHANT has endeavored, by a modification of this process, to ascertain what proportion of alcohol in the blood is sufficient to produce and to maintain symptoms of intoxication. The value of the method and apparatus employed was first tested by examining with it definite mixtures of blood and alcohol, and it was ascertained that if pure blood was thus treated no trace of alcohol could be discovered in the distillate. Two hundred and thirty-one grammes of alcohol (21° stength) were administered to a dog in two doses, at an interval of half an hour. At the same time the animal was made to breathe through a flask containing absolute alcohol, in order to counteract the influence of pulmonary exhalation. At the end of an hour, one hundred litres of air having passed through the flask, sixty-eight cubic centimetres of blood were drawn from the femoral artery. They were found to contain .345 cubic centimetres of absolute alcohol, which corresponds to one part of alcohol in one hundred and ninety-seven of blood. This proportion, in the case of the animal experimented on, was sufficient to produce the most profound intoxication.—*Lancet*, Dec. 10, 1881.

HUNGARIAN EXPERIMENTS ON ANTHRAX.—At the last meeting of the Hungarian Natural Science Society, Dr. Rozsahegyi gave an account of some experiments on the prophylactic inoculation of anthrax, initiated by M. Pasteur. An attempt was made to communicate the disease to a series of inoculated sheep, and to others which had not been inoculated, and it was found that the death-rate in the latter was 93 per cent., in the former only 1.45 per cent. If, however, regard was paid not only to the deaths which resulted from the infection of anthrax, but also to the total mortality from all causes during the experiments, this difference, was found to be somewhat less, the mortality among the inoculated animals being 14 per cent., and among the others 94 per cent. The large mortality in the protected animals from other causes than the subsequent infection seems to show that the process of inoculation is not itself free from considerable risk, either directly, or indirectly by rendering other diseases more fatal. Another point of importance raised, but not answered, is the question, Within what time may the flesh and milk of inoculated animals be regarded as free from all danger of conveying the disease to man? —*Lancet*, Jan. 14, 1882.

THE INTRA-UTERINE APPLICATION OF PERCHLORIDE OF IRON.—Dr. VON TEUDLEBEN (*Centbl. f. Gynäkol.*, No. 24) recommends, as obviating any danger that may arise from the use of injections into the uterus, the use of solid perchloride of iron made into sticks and kept in sealed glass tubes. These are to be introduced into the uterus inclosed in a perforated cannula, which must be moved freely about in the cavity. A few minutes suffice for the complete solution of the stick. He refers to Martin's perchloride pencils, which are compounded of the salt with glycerin and powdered althæa root, and are, therefore, in his opinion, not so useful as the ones described.—*Edinburgh Med. Journ.*, Jan., 1882.

RECURRING LETHARGY.—A remarkable case of lethargy is now to be seen at the Hospice-Général at Rouen. For twenty days a woman, thirty-seven years old, has been in a profound sleep, which is broken for a few moments each night, when she takes some food. The sleep is accompanied by general rigidity, so that the whole frame can be raised as one piece. Her first attack was fourteen years ago, and periods of lethargy have recurred since from time to time. During the intervals she seems perfectly well, and has been employed at the hospital as nurse. Just before the onset of an attack she becomes nervous and taciturn. The onset is always sudden; she goes to sleep in a moment, whatever she may be doing. During the lethargic state the face is well colored and warm, and respiration is regular, but there is, as stated, general muscular rigidity. About half-past ten each night the legs begin to tremble, slight groans are uttered, and are precursors of the brief nocturnal remission. At eleven o'clock she opens her eyes, sits up and eats what is given to her without speaking. Then she again puts her head on the pillow and goes to sleep, but the limbs are relaxed until about four o'clock in the morning, when the rigidity again comes on, and lasts until the following night. Twice she has slept continuously for ninety-six hours without taking food. She does not lose flesh. The long period during which these attacks have recurred, and the form of fixed, not cataleptic, rigidity, render the case unusual, even among the rare instances of lethargic trance.—*Lancet*, Jan. 7, 1882.

RHEUMATIC ŒDEMA.—Prof. POTAIN (*Journ. de Méd. Pratique*, Nov., 1881), draws attention to a form of œdema supervening under the influence of the rheumatismal diathesis, which is usually of favorable prognosis, but which at first sight might seem to be due to some serious affection, as disease of the heart or kidneys. This œdema is recognizable by its mobility, the good general condition, and the absence of any cause beyond antecedent or co-existing arthritic manifestations. It is marked by a peculiar consistency or hardness, as if the liquid remained confined within the cells. Sometimes these tumefactions become more localized, and then may be mistaken for tumors or collections of fluid. Rheumatic œdema indeed shows itself under

extremely variable appearances which may easily give rise to errors of diagnosis.—*Med. Times and Gaz.*, Feb. 11, 1882.

IODINE IN MALARIA.—In the *Maryland Medical Journal* for February 15, 1882, Dr. R. B. MORISON reports two hundred and fifty cases of malaria treated with tincture of iodine in fifteen minim doses, largely diluted, a quarter hour before meals. His cases show an even more favorable result than where cinchonidia is employed, and he states that iodine is now the routine treatment in all cases of acute malaria coming to the dispensary. Similar observations are reported in the *Indian Medical Gazette*, for January, by BABOO BROJENDRY NATH BAMERJEE at the meeting of the Calcutta Medical Society. He states that since 1878 he has made large use of this method of treatment, and in 1879 published in the Calcutta *Medical News* that he had cured ninety per cent. of five hundred cases. Since then, however, he has been led to distrust the reliability of his results, and believes that many of his earlier trials were made in cases which recover spontaneously, while others of these cases last, even under no treatment, only one day. Under such circumstances any drug will appear to act like magic. His present belief is that iodine will prove serviceable in about half the cases. The same author also reports cases in which *burnt alum* appeared to be of service.

ADDISON'S DISEASE.—An interesting contribution to the pathology of Addison's disease was brought by Dr. GOODHART before the last meeting of the Pathological Society, and gave rise to a still more interesting discussion. The cases briefly consisted in atrophy or complete disappearance of the supra-renal capsules, associated with all the clinical features of Addison's disease in a marked degree. It would appear, therefore, that the changes in the capsules which Addison and all subsequent writers have considered essential to the disease may, after all, be only one of several conditions capable of giving rise to this group of symptoms. Many facts were brought forward in support of this opinion. Dr. Goodhart himself was of opinion that such cases as these strongly suggested the view that changes in the abdominal sympathetic were the real source of the symptoms—a view which was traversed by Dr. Pye-Smith, who, after pointing out that the adrenals were obsolete organs in adult life, the removal or destruction of which in animals produced no effect, warned his hearers against the acceptance of this neurotic theory, on the ground of its extremely simple and seductive nature. He supplemented this by pointing out that pigmentation of the skin was very common, and that there was neither pathological nor physiological analogy in support of melasma being due to nerve-changes. Dr. Coupland was hardly prepared to accept Dr. Pye-Smith's views, and pointed out the striking analogy presented by the vomiting and pigmentation of pregnancy in support of disorder or implication of the abdominal sympathetic. He did not think that structural changes need necessarily be found in the nerve-ganglia themselves, although he had met with one notable example, where fibrosis with atrophy of cells existed. He expressed his belief that the changes in the supra-renal capsules were of the nature of a localized tuberculosis, which might take place without any symptoms of Addison's disease. Dr. C. Creighton, in regard to the function of these bodies, referred to the researches which had shown that the blood issuing from the capsules gave chemical reactions different from those which were obtained from blood entering them, and argued that changes, such as atrophy or caseation, which practically cut off the blood-supply, might lead to such alteration in the blood as would bring on pigmentation, while cancerous changes, which increased the circulation through the organs, would have no such effect. Finally, Dr. Fowler referred to a case of lymphadenoma in which the abdominal sympathetic was largely invaded, where the capsules were healthy, and in which all the symptoms of Addison's disease were present.—*Med. Times and Gaz.*, Feb. 11, 1882.

CICATRICIAL OBLITERATION OF THE PYLORUS.—M. DUJARDIN BEAUMETZ communicated to the Société Médicale des Hôpitaux, on January 13, a curious instance of cicatricial obliteration of the pylorus in a midwife who had swallowed sulphuric acid six years previously. Since then the stomach had become enormously dilated, and it had been proposed to perform Billroth's operation of suturing a loop of intestine to the wall of the stomach, after having formed a communication between the two organs. Unfortunately the woman died before the operation was undertaken.—*Gaz. Méd. de Paris*, Feb. 4, 1882.

TESTS AS TO THE PURITY OF CHLOROFORM.—In the *Progrès Médicale*, Dec. 31, DR. YVON refers to certain tests of the purity of chloroform published some time since by Prof. Regnauld, which the surgeon may resort to himself. These are: 1. The sweet odor of the chloroform. 2. It should not redden litmus-paper. 3. It should give no precipitate, nor even produce turbidity, when shaken with a solution of nitrate of silver. 4. It should not become colored when carried to a boiling-point with concentrated solution of caustic potash. 5. Sulphuric acid should not be blackened when brought in contact with chloroform. Other tests can only be practised by the chemist, such as the determination of the density and boiling-point; but Prof. Regnauld states that no chloroform can be regarded as pure which does not satisfy the above-named conditions. But, however pure chloroform may be, it is continually in danger of undergoing spontaneous changes, so that its purity requires verification from time to time; and when it is kept in a bottle incompletely filled, more or less imperfectly corked and exposed to the light, this is soon diminished. For the detection of the changed condition, even before it becomes dangerous, M. Yvon employs, as a test, permanganate of potash one part, caustic potash ten parts, and distilled water 300 parts by weight, which form a solution of a beautiful violet red. This, brought into contact with chloroform that has been rectified, does not change color; but if the rectification has been incomplete, it is more or less rapidly reduced, its reduction being preceded by a change of color to green. This permanganate in solution, therefore, supplies the *pharmacien* with a most delicate and rapid test of the purity of the chloroform furnished to him, and, employed from time to time, ascertains whether the original purity is still maintained.—*Med. Times and Gaz.*, Feb. 11, 1882.

PITYRIASIS.—Prof. HARDY recommends the following mixture in the treatment of pityriasis: Bicarbonate of soda, 20 grammes; arseniate of soda, 10 centigrammes; distilled water, 300 grammes. A spoonful to be taken before breakfast and dinner in the pityrisis rubra of gouty subjects, in disseminated pityriasis, and in pityriasis of the beard or hairy scalp—when the bicarbonate of soda given alone has proved inefficacious. For lymphatic subjects affected with obstinate pityriasis rubra of the armpits, groins, or neck, the arseniate of iron may be prescribed with good effect in doses of two or three centigrammes per diem. As a local application we may use ointments of oxide of zinc, and, later on, those of tar, of juniper, oil of cade (from a tenth to a twentieth), of calomel (from fifty to a hundred parts), or citron ointment mixed with ten parts of cold cream or lard.—*L'Union Méd.*, Jan. 21, 1882.

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THE SMALL-POX EPIDEMIC.

DURING the existence of the present small-pox epidemic we have kept our readers duly informed of its progress. So important is the subject, that we begin in the present issue a tolerably full account of the disease. We are sure that our efforts to illuminate the subject of the variolous diseases will be regarded as timely by our readers, who desire full information on current medical questions. We had intended to devote one issue wholly to variola—a small-pox number—but the pressure on our columns is such, that we can give a part of two numbers only to this topic.

NEPHROTOMY.

IN an editorial in our issue of January 21, we called attention to the general matter of abdominal surgery. The surgery of the kidney is worthy, however, of more especial notice.

Two new terms have been recently added to our surgical nomenclature, which, though not yet always recognized by our surgical writers, are not only convenient, but exact, viz., Nephrotomy, to indicate a cutting operation on the kidney; and Nephrectomy, to indicate its total extirpation. While the latter is exclusively a modern operation, the former was recommended by Hippocrates, and was done in the seventeenth century by Marchetti on Mr. Hobson, the British Vice-Consul at Venice, and probably by the Paris faculty on an archer of Bagnolet. But it fell into entire oblivion until 1869, when, in a thoughtful paper, Mr. T. Smith recalled attention to it, and Mr. Annandale also declared in favor of operative interference. Mr. Bryant, in the recent edition of his *Surgery*, though he has done the operation four times, cautiously says, that "it is probable that in a few years it will be recognized as an operation." But so long ago as 1878, Torres had collected one hundred and sixty-three cases of various operations on the kidney, and properly says, "at present a new period of action in renal surgery is opening. Nephrotomy and nephrectomy are among the orders of the day."

Nephrotomy may be called for by either renal calculus or renal abscess. Even if no stone be found, yet, in the apparent failures of Durham and Annandale, the patients have been so vastly relieved of their nephritic colic as to justify the operation in these cases, and to suggest its advisability in others.

The diagnosis of abscess, and, still more, of calculus, of the kidney is by no means always easy; yet, with our present means, it is rendered sufficiently certain in many—if not in most—cases to make an exploratory operation, at least, entirely justifiable and even imperative. Usually only one kidney will be affected. This may be so even as a result of stricture, as in the remarkable case of Mr. Puzey. The same case, as well as those of Mr. Dowse and of Prof. Simon, shows a sort of see-saw relation between the condition of the urine and the nephritic attacks. During the attacks the urine was normal; but so soon as the pressure of the accumulating pus was sufficient to force it into the bladder, the attack was relieved. Given, says Mr. Puzey, the state of the patient, and the character of the urine could be predicted; or, given the state of the urine, and the condition of the patient could be inferred. Such normal urine occurring during an attack is most important evidence of the soundness of the other kidney. Of course, in an abscess, the use of the aspirator would occur to any one; but Mr. Barker has pointed out an additional value it has in renal diagnosis. He used it in a case in which it was doubtful whether the disease was a new growth, tubercular infiltration, or a calculus. When the point had penetrated the skin the vacuum was produced in the needle, and he hoped that, in case of either of the first two conditions, to get enough tissue *débris* to enable him to diagnosticate its character microscopically, or, if a stone were present, he would obtain the evidence of its presence not only by the pus, but by the grating of the needle against it—a result in which, happily, he was not disappointed. If the introduction of the hand into the rectum be ever advisable, in such serious cases as these it would seem to be allowable, and might give most important information.

The dangers and difficulty of the operation are not great. It is practically a lumbar colotomy terminated in a slightly different manner. On reach-

ing the kidney no stone may be felt, and yet there may be, as in Simon's case, as many as eighteen or twenty. Puncture of the kidney by a needle is not only justifiable, but, as in Dawson's, Puzey's, and several other cases, the renal substance may even be cut to a considerable extent. Hæmorrhage, however, is much to be feared if this be done, unless the kidney be reduced to a sac. The use of Pacquelin's cautery knife may obviate to a large extent this danger.

Not uncommonly the stone, instead of being a simple, uniform body, like a urinary calculus, will be irregular, with branches extending into the calices of the kidney, and will be so imbedded in the pelvis as to require crushing and piecemeal removal —of which Le Dentu gives an excellent example. The existence of internal renal fistulæ, so far from being a contra-indication, is, as Simon has pointed out, a still stronger reason for doing it, in order to avoid their fatal results. Puzey, some time after the operation, was able even to catheterize the ureter down to the bladder.

The results of the operation are most encouraging. We lack yet the exact data as to the recoveries, but they are no doubt very largely in excess of the deaths, and the greater number not only recover from the operation, but are restored to perfect health without even lumbar fistulæ. The other kidney, as Torres has shown experimentally, undergoes compensatory hypertrophy, and the urinary function goes on undisturbed. If nothing be done, spontaneous recovery, according to Torres, follows in but one case in fourteen, or only about 7 per cent., a mortality far greater than that following nephrotomy.

THE PROPAGATION OF THE "FOOT AND MOUTH DISEASE."

The recently published report of Dr. Charles P. Lyman, the veterinary surgeon sent to England by the Commissioner of Agriculture to investigate the "foot and mouth disease" in exported American cattle, impresses us much by the author's carefulness and success. That it was a serious matter will appear when it is considered that about twenty-eight hundred American cattle were condemned and slaughtered from January to June last.

Dr. Lyman first traced the cattle from their very stables in the West to the vessels; found them free from disease on embarcation; and found that the disease broke out usually in the ocean transit between this country and England. Then he investigated the vessels and cargoes, thinking that they might be the sources of contagion, especially as hides, skins, and wool, were often among the freight, but he could discover no connection between them.

But still more careful investigation showed that the "head-ropes" fastened to the horns of the animals to secure them in their stalls were frequently sent back from the lairs in England to be used again with the next lot of cattle, and that these clearly carried the infection. For instance, the "Iowa" left Liverpool April 12, with four bundles of such "head-ropes" among her cargo. She left Boston April 30 with eight hundred and forty-nine cattle all healthy, until May 7, four days before she reached Liverpool, when the "foot and mouth disease" broke out, and on her arrival on the 11th six hundred and forty-nine of the cattle were condemned. She had never carried any live stock from England to America. Dr. Lyman recommends the clear and simple remedy of prohibition by law of all such re-importation of "head-ropes."

Such methodical work, whether in diseases of man or animals, will not only do great good but reflects credit upon the man that does it.

CONSULTATIONS WITH IRREGULAR PRACTITIONERS.

The new Code of Ethics adopted by the New York State Medical Society, has called forth the unqualified approval of the secular press. Our lay contemporaries have never understood the position of the medical profession on their relations to irregular practice in all its varied forms. It is always assumed that there is a quarrel over a dogma—that it is allopathy *vs.* homœopathy—that the latter is a new form of medical belief, a protest against the ancient medical delusions. They hold that the medical profession (the "allopaths") are actuated by jealousy and bigotry, and cannot be persuaded that there is a principle involved. They do not comprehend the fact that medicine is not a dogma, and that it has the same position as the other experimental sciences. If a physician, therefore, adopts the dogma of *similia similibus*, he ceases to be in relation to medical science. If he assumes that dogma to be true, he cannot associate with those who pursue medicine in the scientific spirit. With the dogma of *similars* are connected many visionary notions, which the physician, as a scientific man, must reject. There can be no comparison of views, no harmonizing of opinions, as between a homœopathist and a physician, for the former practises on a theory and employs a method of treatment, which the latter regards as folly or dishonesty. If a doctor announces himself an eclectic, or a homœopathic, or an allopathic, or a physio-medical, or a botanical physician, he assumes a special designation which implies the possession of some special resources, not used nor in the possession of other practitioners, which is untrue. Furthermore, this special designation is a mere pretext to obtain practice in many cases, the doctor so employing it not adhering to its methods. Sailing under false colors is a kind of dishonesty which all condemn. To recognize such

as associates, and to meet them in consultation, is to approve of their tactics, and to condone their offences.

The folly of a consultation between a regular physician, a homœopathist, and a botanical doctor, may be illustrated by an example. Suppose the case were one of violent cholera morbus, the regular physician would propose to cure promptly by the hypodermatic injection of morphia, the homœopathist would advise the third to the thirtieth dilution of veratrum, and the botanical doctor would urge No. 6. It would be simply impossible to reconcile the conflicting opinions, and the consultation would consist in the assertion of their respective principles.

The medical profession, having nothing in common with the advocates of "systems," must necessarily pursue its present course, and have no relations or consultations with them. The bigotry and intolerance of which they are so freely accused, belong to those who pursue an antiquated dogma to the exclusion of modern scientific methods. If all branches (so-called) of the medical art would unite, let the irregular practitioners abandon their trade insignia, and prepare themselves to become physicians. When they do so, and pursue medicine in the true spirit of an experimental science, differences will disappear, and then consultations will become conferences for the benefit of the sick, and not, as now, impracticable for want of a common ground of action.

It was a grievous error on the part of those gentlemen who were active in creating the new code of ethics, to suppose that homœopathists were desirous of dropping their special designation. Why should they do so? They announce themselves as homœopathists, ostentatiously, because this is the shibboleth which attracts business. All who have any opportunity of observing their methods, learn that very few indeed practise homœopathically. If they were governed by conscientious motives, they could easily relinquish homœopathy, and, after a proper training, enter the ranks of legitimate medicine; but doing so, would compel them to relinquish their one claim to popular sympathy and support. It is not surprising that they are prepared to snub the advocates of the new code, and to reject with derision the overtures for the unnatural reconciliation.

The resolution lately adopted by the Royal College of Physicians of London, on the subject of consultation with irregular practitioners, we have recently seen alluded to as if by the terms of this resolution all restrictions were removed. This is a singular and unwarranted perversion of the meaning of this resolution, and of the feelings prompting its introduction and passage. The resolution expressly condemns consultation with those who "trade on some special designation," and it was passed in compliance with the sentiment of the medical profession in England, who had been deeply stirred by two addresses advocating the removal of the present restrictions made at the Ryde meeting of the British Medical Association. It was to little purpose that Dr. Bristowe and Mr. Hutchinson expended their breath; no proposal could be more universally condemned than was theirs, to have the medical practitioners of England abandon their well-founded hostility to all forms of irregular practice.

THE SURGERY OF CYSTS OF THE PANCREAS.

THE deep position of the pancreas, the extreme rarity of its diseases, and the difficulty attendant upon their discrimination, render any information upon its lesions and their management exceptionally valuable. Bécourt and Douponchel have described cysts of this organ as large as a child's head; but it is only within the past year that this class of tumors has attracted the attention of the operative surgeon. Kulenhampff, of Bremen, records the case of a man thirty-nine years of age, in whom, at the end of two months, as the result of severe blows upon the belly, received in hoisting a heavy kettle, a tumor made its appearance in the epigastrium. An exploratory incision was made on the 14th of September, 1881, and a few ounces of fluid, which proved to be pancreatic on chemical examination, were withdrawn with an aspirator. Six days subsequently, the abdomen was again opened, the peritoneum was united to the incision, and antiseptic gauze inserted into the belly with the view of exciting adhesion between the sac and the walls of the abdomen. The object having been accomplished in four days, the cyst was laid open, a litre of fluid evacuated, a tent inserted, and antiseptic dressings applied. During the next sixteen days fluid constantly escaped in gradually diminishing quantities, the tumor disappeared, and a fistulous track remained, which, under the application of tincture of iodine and nitrate of silver, had completely closed on the 30th of October. The operator alludes to a case in the hands of Thiersch, in which a cyst of spontaneous origin, and supposed to be connected with the tail of the pancreas, was opened and three litres of chocolate-colored fluid evacuated. The patient recovered, but a fistule remained.

In addition to the foregoing cases, two examples of the removal of cysts of the pancreas, being the only ones of the kind on record, were reported by Rokitansky, of Vienna, and Bozeman, of New York, both of which were mistaken for ovarian tumors. The case of Rokitansky oc-

curred in a woman, thirty-six years of age, who had suffered with signs of ovarian dropsy for nearly three years. On the 27th of February, 1881, the usual incision was made, and the cyst was found to be extensively adherent to the omentum, stomach, descending and transverse colon, the latter of which was torn to the extent of two centimetres; but the rupture was closed with five sutures. During the separation of the adhesions fifty vessels were ligated, the sac was lacerated, and the patient nearly died on the table. The greater portion of the sac was left in situ, and the outer wound closed. On death from suppurative peritonitis on the tenth day, the cyst was found to be connected with the tail of the pancreas.

The patient of Bozeman was forty-one years of age, and the disease was observed five years before the operation, which was performed on the 19th of November, 1881. After the greater portion of the fluid had been drawn off, and the attachments to the transverse mesocolon had been severed, the enlarged and tortuous splenic vein came into view, as it rested upon the pedicle of the cyst, which was three-quarters of an inch long and broad, and attached to the tail of the pancreas. This was ligated, and the operation was concluded in the usual way. The tumor, with its contents, weighed twenty-one pounds and a half. Not a single vessel required a ligature. The patient was discharged cured on the thirty-eighth day.

IT seems that in New York State there is a law requiring employers to provide seats for their saleswomen, to use when not engaged with customers. We should be very glad to learn that such a law was passed in every State. It is cruelty itself to expect women to stand up all day, as practically has been the case in some stores we know, a furtive rest on box or counter being the only relief. Even if well and strong, it would be hard, but when ailing, or when menstruating, women especially need rest. We observe that suit has been begun in New York City against seven prominent merchants to enforce the law. Whether these particular firms are at fault we do not know, nor is it material. Attention is called to the matter publicly, the existence of the law is made known, and much good we doubt not will be done—not only to women we hope, but also to men.

The matter of a reasonable time for a mid-day lunch, too, is of no little importance to working men and women. It is a difficult thing to arrange all such matters, in view of the imperfections of employers and employés, but that it can be done the testimony of Ehrich Brothers conclusively shows. We commend their honorable course, as stated to the *Tribune* reporter, to other employers, not doubting that the result will be satisfactory to both parties.

AS THE result of the discussion upon the great question of the removal of refuse matters from the vicinity of habitations, which has been actively going on for a number of years past, the conclusion has been well established that the water-carriage system is unquestionably the best adapted to the needs of cities and large towns, provided that certain conditions with regard to the construction and management of sewers be faithfully observed. The main points to be insisted on are—that the sewers should in the first place be well-constructed, they should be made water-tight, and as small as possible, so that they may be, in a measure, self-cleansing and properly flushed at stated intervals, and they should be well ventilated. The surface water should be made to go direct into the river; for if allowed to mix with the sewage it would necessitate an increase in the capacity of the sewers far above their ordinary requirements, and this fact alone would be very disadvantageous; and, moreover, it would entail an increased difficulty and expense in the treatment of the sewage at the outfall.

How many American cities can boast of the possession of a system of sewerage which meets all or any of these plain and simple requirements, is a question which, it is feared, cannot be answered without a profound sense of shame because of grievous shortcomings.

ON January 8, a sermon was delivered at St. Barnabas Church, by the Rev. Richard Hill, M.A., on the subject of "Scientific Experiments on Organic Life—a Necessity, no Sin." Seats were reserved for the medical faculty, and, it is to be hoped, they were well filled.

If discourses upon such topics from similar points of view were more frequent, the profession would probably avail itself less of what is spoken of by a recent English writer as "the well-established medical privilege of remaining away from church."

IN another column we give a brief *résumé* of the first annual report of the Thermometric Bureau of the Winchester Observatory, at New Haven. We feel a pleasure in the fact that Yale College has taken the initiative in this country in establishing such a service. Untested instruments, as the report shows, are so utterly unreliable that no medical man should be willing to trust them. Instruments of precision are worse than useless when they lack the first requisite which their name implies—precision.

IT is an interesting fact, that in some cases of locomotor ataxia, pilocarpine has apparently much alleviated the pains, and improved the condition of patients otherwise. Dr. Jennings reports a case so benefited and Prof. Ball and M. Jules Simon have

communicated other examples to the same effect. The new remedy deserves further attention.

"What constitutes a State? Men who their duties know, and sovereign law." This was Sir William Jones's opinion, and he may have been right, but we doubt whether our esteemed contemporary, the *British Medical Journal*, can with impunity observe that "Wilmington and Delaware also rank among the towns supplied with polluted water." From observed peculiarities of the Delawareans, it seems probable that they have long been familiar with the inferior character of their drinking water, but the reflection on the size of their State will doubtless result in the withdrawal of the entire Delaware patronage from the B. M. J., which should remember that "the *smallest* worm will turn being trodden on."

REVIEWS.

Minor Surgical Gynecology. A Manual of Uterine Diagnosis and the lesser Technicalities of Gynecological Practice, for the Use of the Advanced Student and General Practitioner. By Paul F. Mundé, M. D., Professor of Gynecology in Dartmouth Medical College, etc., 8vo., pp. 381. New York: Wm. Wood & Co., 1880.

In *Our Mutual Friend*, Mr. Dickens describes the despair of the newly married Bella Wilfer, at the absurd directions of the cook-book: "Take a Salamander" or "throw in a handful of some unattainable substance;" and in a similar way the beginner in gynecology, away from the precise and definite ocular demonstration of the schools of to-day, must often feel bewildered about just how to do very simple matters, how to introduce a sponge-tent, how to wrap a probe with cotton, etc. We confess that after having wrapped many probes with cotton we still learned something valuable about it from reading Dr. Mundé's book.

The book fills a real space—meets a real want—really tells us how to do things, not simply when to do them, or to do them, but carefully, diffusely even, describes everything; for instance, just how a woman steps upon the gynecologist's table, and just how likely she is to shrink from doing it. The three hundred illustrations are necessary in such a work. Does a writer say, "Use Heburn's modification of Sims's speculum?" there on the page is its "counterfeit presentment." Does the practitioner wonder how to evert the rectum? turn to page 56, and see a finger everting it; the operator being evidently inside the patient, or else having taken her rectum into another room so as to evert it quietly. Does he shudder in perplexity about how to introduce his finger into the vagina, or in the stilted medical phraseology of the day to "practise indagation?" there on page 42 is a hand, in the attitude of a full-cocked Colt's revolver, pointing into space. All he has to do is to point his hand similarly, and slowly advance. Does he wonder how a woman looks on Dr. Chadwick's table? on page 28 he will see all he should, and probably more; and in many of the illustrations not only does one look at the human form divine, but gifted as it were with some magic power, one sees within the solid flesh the still more solid bone.

The wood-cuts are generally good, except the two remarkable ones, not original, on pages 78 and 79, which might be appropriately named "Clinging to the Rock," and "Afloat on a Dining-Table," but which are called respectively the correct and incorrect positions for examining with Sims's speculum.

The arrangement of Dr. Mundé's book is such as to facilitate reference. Part I., on Gynecological Examinations, embraces Verbal Examination, Methods of Local Examination, Positions for and Couches for Examination, and Examination without and by means of Instruments. Part II., on Minor Gynecological Manipulations and Applications, contains Catheterization, Dilatation of the Urethra, Injections of the Bladder, Applications of Medicinal Agents to Vagina and Cervix, Vaginal Tamponade, Applications to the Endometrium, Dilatation of Uterus, Curetting Uterine Cavity, Local Depletion, Injections into Cervix, Reposition of Displaced Uterus and Ovaries, Pessaries, Artificial Impregnation, Massage, Hypodermic Injection of Ergot, and the Gynecological Armamentarium.

It will be seen at a glance that the field is extensive, and it is admirably occupied by the author. Where verbal description is wanted, we find it full and clear. Where illustration would assist, it is apt. There appear to us to be very few topics neglected, and very few errors. The author seldom dogmatizes, but states the many ways of doing a thing without comment, only occasionally pausing to discourage the use of certain procedures, or to limit their applicability. We can scarcely imagine a more useful book of its kind, written as it is to find favor not only with the beginner, who knows nothing, but the practitioner of years who would willingly know more; and if the latter be disposed to cavil at times at its prolixity about details with which he himself is perfectly familiar, he must remember that it is on just such simple matters that the novice needs enlightenment, the book being both a primer and an encyclopædia of gynecological knowledge.

SOCIETY PROCEEDINGS.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, February 17, 1882.

George Ross, A.M., M.D., President, in the Chair.

Dr. Osler showed a series of specimens illustrating certain points in the pathology of atheroma of vessels.

1. *Atheromatous Plate and Ulcers on Arch of Aorta.*—The specimen was taken from a man æt. sixty-five, who died in the General Hospital about ten days after fracturing the head of the left femur. The death was somewhat sudden and unexpected. The friends would not permit the head to be opened. Nothing of special moment was found in the viscera; fat emboli were suspected, but none were found on careful examination of the lungs. The heart was normal; valves a little stiff. The anterior wall of the arch presented a flat plate, about ten by six cm., and from three to four times the thickness of the rest of the tube. The intima over this area was opaque, and presented irregular prominences. At one point, two cm. in front of innominate, there was an oval loss of substance eight by four mm., which led into a small atheromatous abscess, the contents of which had in great part escaped. The increased thickness of the wall was due to a layer of brownish-yellow firm caseous matter between the intima and media; in places this was five to six mm. in diameter; it was nowhere calcified. There was another spot of softening in it, which had not burst into the tube, but was separated by a thin brownish membrane. On squeezing from the outer side, a puriform fluid escaped. There were a few small spots of atheroma in the descending aorta. No satisfactory cause of death was found, and it seemed scarcely

likely that the bursting of such a small abscess would produce immediate death. Unfortunately, the mode of death was not known, as the patient was found dead by the night-nurse. Such a spot might form the starting-point of an aneurism, as in the next specimen. Whether any symptoms follow this condition, is not positively known; we certainly meet with these ulcers in many cases which, during life, have not afforded any evidence of their presence.

Dr. GIRDWOOD thought it not improbable that the bursting of the abscess, and discharge of its contents, caused death, though, of course, it was impossible to say in the absence of an examination of the brain. He asked whether there was a murmur. Dr. Osler could not say.

2. *Atheromatous Abscess and Aneurism of the Right Iliac Artery. General Atheroma.*—The case was that of an old woman, who died of cancer of the cardiac end of the stomach. She had dry gangrene of the toes of the right foot. The heart was in a state of brown atrophy, and the valves were stiff. The aorta presented numerous calcareous plates, and towards the bifurcation was firm and rigid. The intima had many smooth, brownish-yellow calcified patches, and there were four or five small atheromatous abscesses. The right iliac, at its origin, presented a firm, elastic tumor, the size of a walnut, which almost obliterated the lumen. When the vessel was opened, the tumor was seen to be an aneurismal sac, communicating by a small orifice, which was blocked with adherent clots. On section the sac was found filled with reddish thrombi in the lower, and pulpy atheromatous matter at the upper part. It was evidently a small atheromatous abscess converted into an aneurismal sac. The external iliac and femoral, with its branches, were removed, and the walls found to be thickened, and in places calcified. Near the popliteal, the lumen was greatly reduced, and an adherent thrombus almost obliterated the vessel. In several spots the calcified intima was elevated by a quantity of pulpy atheroma beneath it.

In connection with this specimen a microscopical section was shown of obliterating arteritis of the anterior tibial in a case of dry gangrene in an old man.

3. *Bizzozero's New (?) Blood Element and its relation to Thrombus Formation.*—In the case of extensive cancer of stomach in an old man there was an extraordinary condition of the aorta just above the bifurcation. There was tolerably advanced atheroma of the entire intima, patchy and in places calcified. Just above the bifurcation there was a grayish-white, irregular mass, five by three cm., somewhat flattened but projecting about one cm. from the intima, to which it was closely united. In the abdominal aorta there were six or eight smaller spots of a similar character attached to localized area of atheroma. The appearance when fresh was very suggestive of a neoplasm, and they were thought at first to be a secondary cancerous mass. On examination the large spot was found to be composed of closely set, small, colorless bodies, about one-third or one-fourth the size of red blood corpuscles, discoid, and with a uniform grayish stroma. They appeared to be identical with the individual elements of Schultze's *granule masses*, which are so common in the blood of some individuals. In Dr. Wood's case of aneurism (*vide infra*) the gray filaments on the walls were made up of precisely the same elements. A few colorless corpuscles and some fibrin fibrils also existed, but they were in trifling amount compared with the small elements. Dr. Osler remarked that these were the little bodies recently described by Prof. Bizzozero, of Turin, as a new blood element. But they had in reality long been known, having been described by Schultze in 1861. They occur in the drawn blood in the form of granular clumps, but he (Dr. O.), had shown, in a communication to the Royal Society, in 1874, that in the circulating blood the individual elements of the masses were isolated, and in the form of small discoids; a plate was passed round illustrating them as seen in the subcutaneous vessels of the young rat, which was the most favorable animal for the study of these bodies. In the case under consideration, these elements had apparently collected on an extensive area of atheroma, and had either multiplied there, or the mass had been formed by their gradual accretion. Bizzozero regards them as having an important influence on the development of fibrin (*Centralblatt f. d. Med. Wissenschaften*, Jan. 14, 1882).

Dr. OSLER presented the following specimens in comparative pathology:

1. *Bronchitis in a Calf—Purulent Bronchiectasy.*—The specimen was taken from a Galloway calf three months old, never very strong, and which had been troubled with a severe cough for over two months, and had become much emaciated. There was irregular fever, never more than 2° above the normal.

At the *post mortem*, the anterior lobes of both lungs were dark-colored, airless, and presented a remarkable condition of uniform distention of all the bronchi, with thick, tenacious pus. Even the finer tubes were dilated, and presented, beneath the pleura, a dendritic outline, with here and there a sacculated appearance. The intervening lung-tissue was of dark-red color, and collapsed. A section looked as if the tissue was thickly studded with small abscesses, but each one was only a distended bronchus, and with the probe-pointed scissors could be slit up to its farthest ramifications. There were no caseous masses, or areas of general solidification of the lung. The affection was most marked in the dependent parts of the lobes, the upper regions being free.

The thick creamy contents consisted of closely aggregated pus-cells, fatty *débris*, and a few epithelial elements. No trace of any strongyles. Microscopical sections showed the bronchial tubes thickened, infiltrated, and in many places the adjacent air-cells were filled with inflammatory products. Dr. Osler remarked that such a state of general distention of the bronchi might have been produced by a severe bronchitis in a delicate young animal, the copious secretion gravitating to the dependent parts. This appeared to be much more frequently the case in animals than in man.

2. *Glanders.*—The split head of a horse, showing the nasal fossæ and sinuses. The horse had been ill for several months, but was in pretty good condition, but had a chronic muco-purulent discharge from the nostrils. The specimen showed, (1) numerous ulcers, large and small, many of which could be seen from the external orifices. (2) Glanders tubercles in the form of isolated neoplasms on the Schneiderian membrane. They were thickly set in the upper part of the septum, and some were as large as beans. Many had begun to soften. (3) Diffuse infiltration of the mucosa with a grayish material; this was most evident in the frontal sinuses and in the antra, but it existed more or less over the turbinated bones. (4) Stellate cicatrices of healed ulcers. The trachea presented numerous nodules and a few ulcers, and the lungs contained some of the specific nodules of the disease. Liver, spleen, and kidneys were healthy. The cervical lymph glands were much swollen, and contained a few nodules. There was no cutaneous glanders (farcy).

Dr. GURD asked with reference to its degree of communicability, and whether many cases in man had been met with here.

The PRESIDENT believed that the liability of man to contagion from this disease was somewhat overrated; at least, there were many cases of glanders in horses, and yet instances of infection of grooms and others

were very rare. He had only seen one case, that of a groom who had taken charge of several glandered animals on board of a river steamer. The stench from them was very great, and he took the affection by inhalation of the poison.

Verminous Aneurism.—Portion of the arteria colica of a horse showing a small aneurismal dilatation, the size of an almond; the walls, thickened, covered with adherent thrombi, among which were five or six specimens of the *strongylus armatus*, or palisade worm. The parasite bores its way from the intestine, and penetrating the arteries, excites arteritis, with weakness of the wall, and dilatation and thrombosis in the lining membrane. It is a common affection in horses, and, according to Bollinger, is the most frequent cause of colic in these animals. He states that of one hundred horses afflicted with internal disease, forty are ill with colic; of any hundred diseased horses, forty have perished from colic; and among one hundred colic patients, eighty-seven recover, and thirteen die. No epizootic or sporadic affection in horses is so common, or has so many victims.

Aneurism of Thoracic Aorta; Perforation of Œsophagus.—Dr. C. A. Wood narrated the case. A woman aged fifty-five had been ailing for some days with dyspeptic symptoms. One night, on going to stool, she complained of feeling sick, but did not vomit; fell over and died in a few minutes. There had not been any apprehension of serious trouble, and nothing special had been elicited on examination of chest and abdomen. The *autopsy*, by Dr. Osler, revealed a large coagulum in the stomach, forming a mould of the organ. No source of the bleeding was detected until the œsophagus was dissected, when a small aneurismal tumor, the size of a billiard ball, was found between it and the aorta, about two inches above the cardia. The aorta presented in the lower thoracic portion a small punched-out orifice, the size of a five-cent piece, with a narrow zone of thickened translucent intima about it. This led directly into a small saccular dilatation of the *intima*, not larger than a marble, which had ruptures, and formed the main sac, spheroidal in shape, with walls composed of thickened *media* and *adventitia*. It contained fresh clots and thin mural thrombi; the perforation into the œsophagus was by a small orifice, which was plugged with clot. On the thrombi lining the sac there were curious branched thread-like filaments, strikingly marked against the dark-red background. These were composed of minute spherical bodies, identical with those found in the thrombus in the aorta of the case just described. There was no heart disease, and the aorta was not atheromatous, except in the zone just about the orifice. The trouble had probably originated in a localized atheromatous process, with softening, rupture, and subsequent dilatation. The case presented an additional feature of interest, inasmuch as the woman had been under observation four years before with symptoms of acute phthisis, but had, unexpectedly, made a complete recovery. The upper half of the right lung was firm, and contained much fibroid tissue, with several bronchiectatic cavities.

Dr. Girdwood remarked on the latency of many cases of aneurism and the varied symptoms produced by irritation or pressure. He narrated a case in point in which digestive troubles were for a long time the most prominent feature in a case of abdominal aneurism.

Dr. Mills asked if there was any difficulty in swallowing, and suggested that auscultation of the œsophagus might have given some information in such a case.

Dr. Wood stated that he had made a most careful examination, and had not been able to detect any abnormal physical signs in either chest or abdomen. He had not auscultated the gullet.

Ammonia Poisoning.—Dr. Arthur A. Browne related the case, and presented the stomach and œsophagus. The patient, a man aged fifty-five, had been in the habit of taking bromide of potassium after drinking bouts. His bottle was accidentally filled with strong liquor ammoniæ, and he gulped down a mouthful directly from it. Great pain was at once experienced, and bleeding from the stomach came on, and was profuse for about twelve hours. The vomiting was frequent, but after the bleeding ceased it only recurred when food of any kind was taken. The patient lived four days, and was sensible to the end. There was very slight affection of the mouth and fauces; not much tenderness over stomach; but the chief pain was referred to the chest. The amount swallowed could not be definitely determined. The *autopsy* showed great engorgement of the tissues in the course of the œsophagus and about the fundus of the stomach. The mucosa of the fauces and gullet was of a deep yellow-brown color, looking dry and burnt. The cardiac end of the stomach and a patch at the fundus were chiefly affected; the mucous membrane was greatly swollen, dark-yellow in color, and in places looked sloughy. There was deep congestion of the submucous and muscular layers in this region. The rest of the surface was unaffected. The epiglottis and larynx were injected, but the mucosa was not burnt.

The President said that he had been called to see this case shortly after the accident, and had seen the patient on several occasions with Dr. Browne. The points which struck him as most peculiar were the absence of laryngeal symptoms and the persistent pain in the chest.

Dr. Girdwood suggested that the greater affection of the fundus was due to the great volatility of the poison. In an instance of poisoning with caustic potash the pyloric end of the organ was chiefly involved, and a stricture occurred of which the patient died.

Clonic Spasm of the Psoas Muscle.—Dr. Lapthorn Smith exhibited a woman, aged thirty, with what he considered to be clonic contractions of the psoas and perhaps iliacus muscles of the left side. There were strong pulsations in the left inguinal and lumbar regions, fairly regular in rhythm, but varying in rapidity between ninety to one hundred and fifty in the minute and not synchronous with the pulse. They could be felt best when the patient was sitting on her haunches with the abdominal muscles relaxed. Pressure increased the force of the contraction, but the firmest possible compression controlled it. The movement began at the lumbar vertebræ and could be traced to the lesser trochanter of the femur. When acting strongly, a forcible, shock-like impulse was communicated to the hand. The side of the body was jarred and moved with each contraction. When recumbent, the left leg was moved but not flexed. The patient was hysterical and had been the subject of this affection for over eight years. Dr. Smith believes the contractions to be due to nerve discharges from unstable cell elements in a localized spot of the spinal cord.

Dr. Girdwood suggested that the contraction might be in the abdominal muscles. The patient was examined by the members, most of whom agreed with Dr. Smith as to the site of the contraction.

Medico-legal Case.—Dr. Girdwood read a paper on the Plantagenet murder case, in which David Prevost and Damage Brunet were arraigned for the murder of Pierre Brunet. The facts were briefly as follows: The murdered man, aged eighty-one, but strong and active, lived alone, his nearest neighbors being his second wife and a step-son, who lived together on a lot which he had given the son, on the condition of an annual payment of twenty dollars. On the death of the old man the land would be free of encumbrance. Damage Brunet

had repeatedly tried to sell the lot, but the accrued tax interfered. On Monday, September 20, 1880, the old man was last seen going towards a bush, one and a half miles distant from his house, where he was engaged in clearing. On Wednesday he was missed and a search was made, but the body was not found until three weeks after. It lay in a field, near where he was working, covered with twigs, the pockets turned inside out, and the contents gone. Decomposition was far advanced, and the head separated on attempting to move the body. About the time of the murder, David Prevost went to the shanties lumbering, but while there he behaved so strangely, talking of some dreadful deed which he had committed, and asking the men to pray with him, that he was sent home, where, shortly after, he was imprisoned for larceny. He then confessed that he and Damage Brunet had murdered the old man, having strangled him in his house and carried him to the field where he was found.

The points of interest chiefly dwelt upon by the author were the advanced state of decomposition in the short space of three weeks, and the plea of insanity raised in the case of David Prevost, who was uneducated and of a low, revolting type of countenance. There was no apparent motive why he should have committed the deed, other than the solicitation of his friend, and, perhaps, the gift of a small sum of money. Dr. Girdwood raised the question of his knowledge of the illegality of the act, and maintained that to constitute legal responsibility, there should be a knowledge of the illegality of the act. He argued that in the public schools instruction should be given concerning the different crimes, and the punishments attached to them.

Owing to the lateness of the hour, the discussion was postponed until the next meeting.

CORRESPONDENCE.

THE CULTIVATION OF MICROPHYTES AS BEARING UPON THE DOMESTIC ORIGIN OF YELLOW FEVER.

To the Editor of THE MEDICAL NEWS:

SIR: In a report to the Surgeon-General of the army upon the yellow fever epidemic of 1876, in Savannah, parts of which were published in the *American Journal of the Medical Sciences*, July, 1877, I expressed the belief that that particular outbreak was of domestic origin. This judgment I reached in opposition to my preconceived opinions, from considering what appeared to be facts irrespective of hypotheses. The contrary view was maintained by many—I may say by most—including respectable authorities; and stress was laid, sometimes by expression and sometimes by implication, upon the antagonism of my opinion with the prevalent belief in the germ theory of the origin of disease. The drift of feeling was that, the germ theory being probably true and not admitting within its provisions apparently spontaneous outbreaks, my observations were either inexact in themselves or incomplete as a series. I do not rehearse this to reopen a discussion on the Savannah epidemic. At this date no new facts properly authenticated can be produced, nor is it probable that believers in either view will change their minds as to what was the case in 1876. But I do think it important to invite attention to indications confirmatory of what I have expressed.

In a paper[1] that was read before the American Public Health Association, November 20, 1879, this reply was presented to those who, on hypothetical grounds, deny that a domestic origin may be attributed to yellow fever:

"But the germ theory in its integrity does not compel belief in an infinitely extended ancestry of germs, each identical with its predecessor and its successor, and each capable of exciting some specific disease immediately upon the victim coming within its range. With more confidence we may imagine an infinite variety of self-propagating germs, each set of which may gradually yield to adjacent influences, as is conspicuous in the cultivation of vegetation and is shadowed in animal life, and then suppose that with the metamorphosis induced by the surrounding conditions the yellow fever cause is gradually evolved. These presumed changes, although, perhaps, involving many generations of germ life, may easily be accomplished within the period of a single season, and would be developed with a rapidity proportionate to the propitiousness of the situation. If such a modification has occurred once, it may occur a thousand times. This view is perfectly consonant with the essence of the germ theory, and at the same time it is not inconsistent with the facts as I believe they are found in practice."

That the virulence of some germs may be mitigated, and that some disease-causes may be so far controlled or domesticated, as it were, as to be used as allies for the repulse of their more savage kin, the brilliant discoveries and practice of Pasteur, in the case of splenic fever, have placed beyond doubt.

I offer, parenthetically, the suggestion that the recognized mildness of some diseases towards the close of an epidemic may be explained by Pasteur's discovery that the disease-cause is weakened, not intensified, as we might suppose, by passing through the bodies of the sick; that is to say, in so far as the disease is propagated from case to case each generation of poison is weaker than its predecessor, requiring less resistance on the patient's part to overcome it.

Now, reverting to what Pasteur has demonstrated, that some disease-germs may be changed in degree towards one end of the scale, that is in the direction of harmlessness, there appears no logical obstacle to the modification, under auspicious circumstances, of originally innocent germs in the other direction, that is, towards malignancy. This, there is reason to believe, Grawitz, of Berlin, has demonstrated; although it is proper to say that a very recent paper by Koch throws doubt upon his procedure. But Grawitz's experiments appear to have been conducted with scientific precaution and care, and to show that from an innocent fungus one deadly to animal life may be cultivated. Whether that is absolutely certain or not, I make this note to insist, inasmuch as Pasteur has proved their mutability as a class, upon the increased possibility of the natural cultivation, under a torrid sun in the alkaline decomposing feculence of sewers, cesspools, and wharf-heads, of those microphytes to which yellow fever may be due.

Very truly yours,

ALFRED A. WOODHULL,
Major and Surgeon U. S. Army.

BROOKLYN, February 17, 1882.

[1] "May not Yellow Fever Originate in the United States?" Public Health Reports and Papers, Vol. v., p. 105.

NEWS ITEMS.

KANSAS CITY.

(*From our Special Correspondent.*)

SPINA BIFIDA.—At the last meeting of the Jackson County Medical Society, an interesting case of hydrorachitis was exhibited by Dr. Lyman Berger. The case is worthy of note from the fact that after having, in vain, pursued several of the recognized modes of treatment, an apparently untoward accident gave a very satisfactory cure.

The important points in this case are as follows: A child of undeformed German parents, now five months

old, was born with a cleft spine, and a tumor of about three-quarters of an inch in diameter, situated over the last lumbar vertebra. During the first five weeks subsequent to birth, the tumor rapidly increased in size, until it was somewhat over two inches in diameter, and the overlaying skin became thin and translucent. At this time the child was put under treatment, and within the following six weeks five separate operations were from time to time performed, generally after the manner of the partial or nearly complete evacuation of the sac by aspiration and the injection of tincture of iodine, with the after-treatment of pressure by means of the cupped sponge, or, as was used after the last operation, of a small chamois skin covered hernia pad. None of these operations were successful, the sac refilling, more or less rapidly, after each one of them. Upon the day following the last operation, while the dressings were being removed preparatory to adjusting a smaller-sized (⅞ by 1¼ inch) hernia pad, the sac ruptured and completely emptied itself. The pad was quickly adjusted to the new pouch-like depression in the tumor, and held in place by adhesive strips, so that it was perfectly immovable. The sudden evacuation of the contents of the tumor brought about a condition of collapse, and no small amount of attention was required to keep the child alive; but after a time, however, the system rallied, and the parts seemed to accommodate themselves to the loss of the fluid. The only apparent impression left upon the brain by so great a loss of cerebro-spinal fluid being a depression in the anterior fontanel. For two days after the occurrence of the accident there was oozing of the spinal fluid from the point of rupture, but after this time none could be detected. At the expiration of a week the opening was found to be closed and to be healing by granulation, and the walls of the sac to be adherent. The tumor at this time had the appearance of a concave flattened disk, of from 2 to 2½ inches in diameter, depressed in the centre, and lying flat upon the back. There existed a circular space of about an half inch in diameter at the centre of the pouch-like depression in the flattened tumor, which had a thickened, cutaneous covering, and beneath which could be distinctly felt the cerebro-spinal fluid. This circular space, at the time the case was reported, was seen to have been gradually growing smaller, and it was anticipated that eventually the space would be closed, or so filled in with thickened tissue as to give a very fair result.

VIENNA.

(From our Special Correspondent.)

Hyperemesis in Pregnancy.—Dr. Carl Ritter Braun von Fernwald was recently called in consultation to a distant part of Austrian-Hungary, to a lady of rank, suffering from hyperemesis in pregnancy. He found the patient in the fifth month of pregnancy, very much emaciated from the totally uncontrollable vomiting. The attending physician was urgent in advising the immediate induction of premature labor. Dr. Braun, however, did not approve the suggestion, but caused the vaginal portion of the cervix to be freely bathed in a ten-per-cent. solution of nitrate of silver in water. Five minutes later the vaginal portion of the cervix was well dried to prevent further corrosive action. The vomiting ceased at once, and one hour later the patient asked for a veal cutlet, which she ate with great relish and retained. There has been no recurrence of the vomiting. Dr. Braun is of the opinion that, in general, hyperemesis in pregnancy should not be regarded as an indication for the induction of premature labor, for the reason that he has frequently seen this operation result in death, while he has never seen a case of fatal hyperemesis occurring in a pregnant woman.

For Hysterical Convulsions during pregnancy, a very frequent and annoying occurrence among Viennese women, Dr. Braun uses, with great success, the following prescription:

℞.	Asafœtida, ...	5.
	Camphor, ...	.5
	Aqu. Font., ...	200
	Vitelli Ovi., ...	No. 2
	D. S. For two clysters.	

The Public Health.—For the week ending February 18, the deaths from small-pox, not before reported, were as follows: Chicago, 25; Pittsburg, 22; St. Louis, 9; New Orleans, 4; Omaha, Neb., 2; Richmond, Va., 5; and Brooklyn and San Francisco, each 1. Diphtheria caused in the same week 23 deaths in Brooklyn; 8 in Detroit; 7 in Chicago; 4 each in St. Louis and San Francisco; 3 in Buffalo; and 2 in Pittsburg. For the same period the deaths from typhoid fever were 12 in Chicago; 8 in Buffalo; 4 in San Francisco; 3 in Pittsburg; 2 each, in New Orleans, St. Louis, and Richmond, and 1 in Brooklyn. At the present time Vicksburg, Miss., is suffering from an epidemic of measles; chicken-pox is also said to be prevalent. There were 6 deaths from measles in Chicago. Scarlet fever is still very prevalent in Brooklyn, 30 deaths being reported in the week. Buffalo in the same week had from this cause 12 deaths; St. Louis, 7; San Francisco, 4; and Detroit, 3. With the exception just noted, neither measles, whooping-cough, nor cerebro-spinal meningitis are prevalent in any of the above-named places.

In the northern and western cities, and in San Francisco, pulmonary disease figures prominently in the weekly bills of mortality. Consumption was proportionately more fatal in New Orleans than in most of our large northern cities, and in San Francisco the mortality from this cause (16) was greater than from any other cause except pneumonia (25).

The mortality reports for the week ending February 25, so far as received, show a marked falling off in the number of deaths, from small-pox, particularly noticeable in Philadelphia, where the deaths decreased from 17 to 7. The numbers reported are as follows: Chicago, 35; Cincinnati, 25; New York, 12; Philadelphia, 7; Pittsburg, 11; Richmond, Va., 4; Memphis, 21; Boston, 1; and in Richmond, Va., 1 death from varioloid. At Pittsburg there were 60; at Milwaukee, 1; and at Richmond, Va., 21 new cases of small-pox and varioloid reported. From cerebro-spinal meningitis in Boston, Cincinnati, and Augusta, 1 death each; and in Philadelphia, Pittsburg, and Chicago, 2 each is the record of the week. Diphtheria is still very prevalent in Boston, 14 deaths being reported, the same number as occurred the preceding week. There were 12 deaths in Philadelphia; 9 in Chicago; 2 each in District of Columbia, Wheeling, Va., and Dayton, O.; and 1 each in Pittsburg, Richmond, Va., and Milwaukee. There are no reports of excessive mortality from scarlet fever. Philadelphia reports 7 deaths from this cause; Chicago, 7; Pittsburg, 5; Providence, R. I., 3; Milwaukee, 3; and Cincinnati and the District of Columbia, each 1. The deaths from typhoid fever are as follows: Philadelphia, 16; Pittsburg, 15; Chicago, 7; Boston, 5; District of Columbia, 4; Indianapolis, 3; Cincinnati, Wilmington, Del., and Louisville, each 2; and Providence, R. I., Richmond, Va., Wheeling, W. Va., Savannah, and Charleston, each 1. From seventeen prominent places throughout the country there are reported in the aggregate only 8 deaths from whooping-cough and 25 from croup, 8 of the latter occurring in Chicago.

Health of Hudson Co., N. J.—Population for 1882 estimated at 394,402. Deaths for month of January, 558. The mortality for January has been exceptionally

great this year. Consumption heads the list with 75 deaths. The deaths from other prominent diseases were as follows: Pneumonia, 59; small-pox, 49; diphtheria, 35; bronchitis, 25; scarlet fever, 26; croup, 22; malarial fever, 19, and typhoid fever, 12. It is a noticeable fact that nearly one-half of all the deaths were of children under five years of age. Diseases of the respiratory organs caused about one-third of the total mortality. Small-pox is charged with 8.78 per cent. of the whole number of deaths for the month.

HEALTH IN MICHIGAN.—The Bulletin of the State Board of Health for the week ending Feburary 18, 1882, states that scarlet fever and tonsillitis have considerably increased, and that erysipelas, consumption, and neuralgia have considerably decreased in area of prevalence.

Diphtheria was reported present during the week ending February 18, and since, at twenty-one places; scarlet fever, at eighteen places; measles, at six places; and small-pox, at seven places in all, as follows: at Parkville, St. Joseph County (one case, convalescent), February 15; at Grand Rapids, Escanaba, and Detroit, February 18; at Stanton, Montcalm County (one case), February 20; at Spalding, Menominee County (nine cases, one new), February 21; among the Indians at Indiantown, near Spalding (eight cases), February 21, 1882, and twenty-two deaths to that date..

BIRTHS IN PARIS.—From the 20th to the 26th of January, 1882, there were 1353 births, distributed as follows: Males—legitimate, 491; illegitimate, 202; total, 693. Females—legitimate, 480; illegitimate, 180; total, 660.

During the same period there were 86 children born dead, or dying before registration. Of these there were 30 legitimate males, and 9 illegitimate; total, 39; and 32 legitimate females, and 15 illegitimate; total, 47.

THE GRAND PRIX LECAZE.—The Paris Academy of Sciences has conferred on Prof. BROWN-SEQUARD the distinguished honor of the Grand Prix Lecaze. This prize, which is of the value of 10,000 francs, is only given in recognition of a life-long devotion to physiological science which has resulted in important discoveries. The previous recipients have been Chauveau, Marey, and Dareste.

THE UNIVERSITY OF VIRGINIA.—A correspondent of the *New Orleans Medical and Surgical Journal* writes as follows of the University of Virginia: "Had our Southern neighbors no other boast, they might well be proud of that University.

"Let us see what per cent. of each class is graduated there. I have accurate data for two years only. In 1878–79 there were 53 men in the medical class; 48 of these applied for graduation, and 21 alone were successful. In 1879–80 there were 46 in the class; 31 applied and 10 only graduated. I had almost as soon be one of those 10 as a survivor of the 600 at Balaklava. Can we wonder at the small classes there? But the men of that faculty prefer a small class to a large one, where the pen which titles a fool tells a lie at every stroke."

NEW YORK NIGHT MEDICAL SERVICE.—Dr. William A. Ewing, Superintendent of the New York Night Medical Service, has submitted to the Board of Health a report of the operations of the bureau during the sixteen months of its existence, from September 1, 1880, when the act of Legislature was obtained, until January 1, 1882. It appears that in all, 573 calls have been made during the period above specified. These were distributed among 132 physicians out of the 450 whose names appear upon the roll. It is noticed as a curious fact that the tenth precinct, embracing a large tenement-house district lying east of the Bowery, has afforded more calls upon the service than any quarter of corresponding area in the city. The majority of cases treated have been of a very urgent description, comprising, for illustration, 57 night attacks of croup, 28 of pneumonia, 10 of pleurisy, 55 of confinement, 2 of gunshot wounds, 11 fractures and dislocations, 15 suicides, and 3 of accidental poisoning. Of all the cases in which calls were made, only 19 were able to pay the fee specified by law, and in the remaining 554 the appropriation was called upon.

HYGIENE IN THE PUBLIC SCHOOLS OF PARIS.—According to a decree of the Minister of Public Instruction, a commission has been formed whose duties are to study the relations between the methods of instruction and the hygiene of the pupils, receiving authority to make whatever inspection and examination they may deem necessary, and to report their results to the Superior Council.

SANITARY CONVENTION AT GREENVILLE, MICHIGAN.—In accordance with invitation received from citizens of Greenville, arrangements have been made by a local committee of citizens acting with a committee of the State Board of Health, to hold a Sanitary Convention in the city of Greenville, Michigan, on Tuesday and Wednesday, April 11 and 12, 1882. At each session of the convention there will be addresses or papers on subjects of general interest pertaining to public health, each paper to be followed by a discussion of the subject treated.

The officers chosen are as follows: President, Rev. J. L. Patton, of Greenville; Vice-Presidents, Hon. E. H. Stanton, of Ionia; Rev. A. A. Brown, of Greenville; Hon. H. H. Hinds, of Stanton; Charles P. Bigelow, M.D., of Big Rapids; Hon. J. P. Shoemaker, of Amsden, and Hon. R. C. Miller, of Greenville; Secretary, Charles S. Sheldon, M.D., of Greenville.

Manufacturers of sanitary apparatus or appliances, and dealers in the same, or in any article conducive to health, are invited to send samples of their wares for exhibition at this convention. Judges will be appointed to examine the various articles on exhibition, and certificates of merit will be awarded to such articles as are deemed worthy.

Among the subjects which it is desired to have presented and discussed are the following:

1. The Prevention and Restriction of Small-pox, Diphtheria, and Scarlet Fever.
2. The Present and Prospective Water-supply of Greenville.
3. The Disposal of Decomposing Organic Matter.
4. Pure Air; Why we should have it, and How we shall get it.
5. School Hygiene.
6. The Relation of the Newspaper Press to Sanitary Reform.

SPREADING OF YELLOW FEVER BY RAILROAD CARS.—In order to prevent the spread of yellow fever by means of railroad cars, etc., the Pullman Southern Car Company adopted the following precautions during the late epidemic, as shown in the Report of their Superintendent to the Illinois State Board of Health, from which the following extract is made:

All our cars were thoroughly disinfected at *every terminus of our lines*, and pure carbolic acid was exposed in open vessels in every car while *en route*. At terminal points every car was thoroughly cleaned—all bedding, seats, carpets, and, in fact, everything movable in the car, were taken out, whipped, brushed, and then fumigated in a close room with sulphur. Each car was scrubbed inside and out, and then closed and

fumigated with sulphur. After this process with car and equipments, they were both exposed to the open air for several hours, carefully dusted, and both car and equipments liberally sprinkled with carbolic acid. Carbolic acid was put in each spittoon on every car running into or through any infected district five or six times during each day or night. All cars were thoroughly ventilated while *en route*, by open doors, windows, and deck sash.

As soon as the disease was declared epidemic in New Orleans, Memphis, and other points, our cars were withdrawn, as in the case of the lines from New Orleans to Chicago and St. Louis, from Louisville to Memphis and Little Rock, and from Cincinnati to New Orleans, *via* Montgomery. We had one line of sleepers only that continued unbroken during the entire epidemic—the line from New Orleans to Cincinnati *via* Milan. On this line all cars were treated at each terminal point and *en route* as above indicated.

During the entire course of the epidemic we did not have a single case reported to us of yellow fever occurring from any *supposed infection* from our cars; and in *every instance* when any person coming from any infected district was taken sick on one of our cars, *not only the person*, but the *mattress, pillows, blankets, and sheets as well, were removed at the first station, and all bedding and material thus removed was invariably destroyed—in no instance was any portion of it ever returned to a car.*

We do not know of a single case, *nor do we believe one can be found*, of yellow fever developing itself on any of our cars, *except in persons coming north from infected districts*, and in whose system, beyond a doubt, the germs of the disease were implanted before they undertook the journey. In every case of this kind (and they were very few), the persons, and everything movable in the car, with which they had come in contact, were removed from the car as above described.—*Chicago Med. Journ. and Exam.*, Nov., 1881.

The Registration of Clinical Thermometers.—We have recently received the first Annual Report of Leonard Waldo, the astronomer in charge of the Horological and Thermometric Bureaus of the Winchester Observatory of Yale College, and have found it of so much interest and importance to physicians that we desire to call especial attention to it.

Many do not know the fact that in our own country they can have their thermometers tested; and quite as many, perhaps, are not aware of the pressing importance there is for such a test. Yet Mr. Waldo states that fifty of the thermometers tested during the year had errors of over 1½°; and he states, and we believe from some experience he is right, that "there is little doubt that the great majority of physicians' thermometers now in use in the United States are from 1½° to 2° too high in their indications!" Especially will such errors be marked in newly-made instruments, and the Observatory offers to seal up any ungraduated instrument sent to them, and after a year to return them to the instrument makers, with a certificate. They can afterwards be graduated, and then tested and certified as to their accuracy before being sold.

We are glad to see that during the year as many as 1667 thermometers for clinical and physiological use were tested—a very favorable showing as compared with the Kew Observatory (England) numbers, which were 1439 in 1875, and 3405 in 1879.

The regulations are very simple. The thermometer, which should be numbered, or otherwise designated, must be carefully packed and forwarded to the Observatory by express or by mail, prepaid, of course, and with fifty cents, the very moderate charge for such careful testing. After about three days they are returned with a numbered certificate giving the error in tenths of a degree for each 5° of the scale. Hospitals or individuals can make arrangement for systematic examinations at stated intervals of all their instruments, a necessary precaution to ensure continued accuracy. In fact, the Observatory, as in fine watches, so in thermometers, is striving not only to give us the exact errors of our instruments, but by a proper stimulus to the makers of both to foster the production of better instruments. How needful that is we have already stated, and an error of 1°, or even of 2°, is so probable in unregistered instruments as to throw discredit on all such. We feel bound, therefore, to urge our readers to buy only those that have been registered, and that are reasonably free from error, say with a maximum error of $\frac{5}{10}$°; and if they have already bought such uncertified instruments to forward them at once for test and certificate. How successful, also, the stimulus has been even a year shows; for while in June, 1880, four-fifths of all thermometers received from seven makers were in error over ⅓°, and two per cent. of over 1°. in April and May, 1881, four-fifths of all thermometers sent had errors less than $\frac{3}{10}$°. The standard of comparison used is within about 0.03° centigrade of perfection.

Medical School of Glasgow.—The class lists for the present session show that the number of students enrolled in the several medical schools is 863. Of these, 63 are attending science lectures, without the intention of entering the medical profession, leaving 800 *bona fide* students of medicine in Glasgow.

The Importance of the Coccyx in the Arab Anatomy.—Some curious facts are to be found in Bertherand's work on *Medicine in Algiers* as to the importance attached by the Arabs to the coccyx in relation to the future state. They designated this bone *Adeum tehoutehou*, the first word meaning bone, the second, a phonetic imitation of the sounds produced by the intestinal gases passing the anus. Mohammed has said that all the bones of the body are consumed in the ground, with the exception of one, the coccyx; and that this bone, the first created by the Deity for the construction of each skeleton, is the only one which resists all the causes of destruction, in order to serve at the judgment day for the rebuilding of each body. The rain of forty days, which will precede this great day, will fertilize all the coccyges, as osseous germs destined to reproduce all the other parts of the body in the same way as the seed which contains within it all the elements of the plant to which it will give birth.—*L' Union Méd.*, Jan. 21, 1882.

Guy's Hospital.—The managers of the nursing system, so strenuously upheld by the governing body of Guy's Hospital, are at least unfortunate beyond all precedent. The last nursing misadventure, resulting in the death of one of the patients in Guy's Hospital, appears to have arisen immediately from the disregard, by the ward-sister, of one of the ordinary rules in the management of the wards, namely, keeping all the poisons in the poison-cupboard. In each ward, there is a poison-cupboard, where all poisons are kept. In the present instance, the sister had neglected this necessary measure of safety, and left a basket on the table, in the middle of the ward, containing four packets, each of ten grains of morphia. A night-nurse came on duty in the evening, was told nothing of the powders by the sister, and mistook them for quinine powders. Why were the powders, of forty grains of morphia, enough to kill forty people, not placed in the poison-cupboard? For this, the ward-sister is, we presume, responsible. The nurse who gave the powders is responsible, in a less degree, for not having noticed

the poison-card lying among them. The dispenser would also have acted, to say the least of it, with more discretion, had he labelled each powder, sufficient as it was to destroy ten people, with a poison label. We cannot, however, approve the practice, which was going on, of allowing the ward-sister to prepare the solutions of such large doses of poison. Where it is necessary to employ poisons in such quantities, special precautions should be used. In the unfortunate case in question, the reverse seems to have taken place.—*British Med. Journ.*, Jan. 14, 1882.

PRISMATIC MIRROR FOR RHINOSCOPIC EXAMINATION.—At the meeting of the Société de Biologie on the 8th of December, M. GELLÉ presented a prismatic mirror for rhinoscopic examination, which has the advantage of presenting the image in the true proportions, and not distorted, as in the plane mirror. It is also extremely easy to introduce and gives a very distinct and well-defined image.—*Revue Mens. de Laryngologie, D'Otologie et de Rhinoscopie*, Jan. 1, 1882.

CLAUDE BERNARD.—The Municipal Council of Villefranche (Rhône) decided at their last meeting to erect a statute to the memory of Claude Bernard, in the place which already bears his name.

PERSONAL.—The dignity of State Chancellor has been conferred by the Emperor of Austria on Dr. Alexander Rollet, Professor of Physiology in the University of Gratz, in recognition of his long services in the cause of science.

OBITUARY.

ROBERT BRIDGES, M.D., Emeritus Professor of Chemistry in the Philadelphia College of Pharmacy, and one of its trustees, died at his residence in this city, February 20, 1882, near the close of his seventy-sixth year. He was born in Philadelphia, March 5, 1806.

His general education was concluded at Dickinson College, Carlisle, Pa., and he was graduated from the Medical Department of the University of Pennsylvania, March, 1828.

During many years he was the assistant of the Professor of Chemistry, Dr. Franklin Bache, in the Philadelphia College of Pharmacy, and succeeded him in the chair in 1842. His last course of instruction was delivered in 1879, when failing health induced him to retire, after thirty-seven years' faithful and efficient service.

After the death of Dr. Franklin Bache in 1864, he took his place in editing Wood and Bache's *Dispensatory*. He was assistant editor of, and contributor to, the *American Journal of Pharmacy*, and edited the reprints of Graham's *Chemistry*, Fowne's *Chemistry*, and Attfield's *General Medical and Pharmaceutical Chemistry*. He was a member of the Committee of Revision and Publication of the *Pharmacopœia of the United States*, in 1860 and 1870; a councillor of the American Philosophical Society; and a member of the Academy of Natural Sciences, of Philadelphia, from January, 1835. He was a Vice-President of the Society during fourteen years, and President for the year 1865, and declined re-election. He served the Academy as Librarian, as Corresponding Secretary, and as a member of its Publication Committee during twenty-four years.

He was elected a Fellow of the College of Physicians of Philadelphia, July, 1842, and held the office of Librarian during several years.

His learning was extensive, accurate, and varied, and among naturalists and medical men he was well known by reputation throughout the country. He was remarkably modest, unobtrusive; but never failed to win the kind and respectful consideration of all who became acquainted with him. His conduct throughout life was characterized by good sense, benevolence, and rigid probity under all circumstances. His firm yet quiet ways shed a salutary influence on the prosperity of the several institutions in which he was interested. His services to the Philadelphia College of Pharmacy and to the Academy of Natural Sciences, of Philadelphia, must be long remembered.

NOTES AND QUERIES.

A REFERENCE IN CICERO TO DISSECTION.

To the Editor of THE MEDICAL NEWS.

SIR: Few actual statements are made by ancient authors, even by the medical writers, as to the prevalence of dissection. Here and there an allusion to the custom is met with, which by the very indirectness of statement become the stronger proof that dissection was practised to a greater or less extent. Hence, we feel that no apology is needed for quoting the following passage from Cicero's *Tusculan Disputations*, Bk. I., Ch. XX., to which our attention was recently directed by Mr. W. E. Foster, the accomplished librarian of the Providence Public Library.

Speaking of our bodily senses, he says, "Neque enim est ullus sensus in corpore, sed ut non physici solum docent verum etiam medici qui ista aperta et patefacta viderunt, viæ quasi quædam sunt ad oculos ad aures ad nares a sede animi perforatæ," or translating it somewhat freely, "Nor is there any perception in the body itself, but, as not only naturalists teach us, but also doctors *who see these things uncovered and laid open*, there are, as it were, ways made (perforated) from the seat of the soul to the eyes, the ears, and the nose."

Cannot some of our scholarly readers furnish us with other similar allusions?

I am, sir, yours faithfully,

WILLIAM W. KEEN, M.D.

PHILADELPHIA, March 1, 1882.

CONVERSATION IN A DOCTOR'S OFFICE.

Miserable Old Woman.—"My daughter is married to Barney McMunns, and he gives her bad treatment, and abuse, and hardship—"

"And *McMunns, he licks her?*" puts in the doctor.

"Yes, and indeed he does," the old woman mutters.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 21, TO FEBRUARY 27, 1882.

POPE, B. F., *Captain and Assistant Surgeon.*—Relieved from duty in Department of Dakota and to report in person to the Surgeon-General for duty in his office.—*S. O. 42, A. G. O., February 21, 1882.*

MOFFATT, PETER, *Captain and Assistant Surgeon.*—Relieved from duty at Camp Spokane, Washington Territory, to proceed to Fort Coeur d'Alene, Idaho, and relieve Assistant Surgeon Spencer from duty at that post.—*S. O. 20, Department of the Columbia, February 11, 1882.*

FINLEY, J. A., *Captain and Assistant Surgeon.*—Fort Adams, Rhode Island. Granted leave of absence for one month.—*S. O. 29, Department of the East, February 20, 1882.*

SPENCER, WM. G., *Captain and Assistant Surgeon.*—Granted leave of absence for one month, with permission to apply for an extension of one month to Division Headquarters, and for an extension of four months to the Adjutant-General of the Army.—*S. O. 19, Department of the Columbia, February 10, 1882.*

RAYMOND, H. I., *First Lieutenant and Assistant Surgeon.*—Relieved from duty at the Presidio of San Francisco and assigned to duty at Alcatraz Island, California.—*S. O. 28, Military Division of the Pacific and Department of California, February 15, 1882.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

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ORIGINAL LECTURES.

CLINICAL REMARKS ON FACIAL NEURALGIA, TREATED BY NEURECTOMY.

Delivered at the Orthopedic Hospital and Infirmary for Nervous Diseases, Philadelphia.

BY S. WEIR MITCHELL, M.D.,
PHYSICIAN TO THE INFIRMARY.

(Reported by GUY HINSDALE, M.D.)

GENTLEMEN: On the 29th of April, 1881, Ann D. came to this clinic suffering from facial neuralgia. She is forty-three years of age, and has been employed in housekeeping. For the last fifteen years she has lived in New Jersey and has enjoyed comparatively good health until three years ago, when a dysmenorrhœa, which had always been severe, became greatly exaggerated. In the summer of 1876 she had, without known cause, her first attack of facial neuralgia. The pain began in the lower jaw upon the left side, and finally extended so as to involve, in turn, other nerve branches on that side of the face. This attack lasted for six weeks. There have been since then several distinct onslaughts of neuralgia, each of them longer and more severe than those which preceded.

When she applied here her condition was one of absolute health, save as regards the maxillary pain and the uterine troubles, which latter seemed of late, however, to have been less annoying. The menstrual flow did not appear to bear any causal relation to the neuralgia, nor, when the pain was present, did it seem to be increased during menstruation.

The facial pain occurred every few minutes, day and night, and lasted a variable time, but not over two or three minutes. At first it began at a point in the jaw at, or near to, the mental foramen, but soon spread to the second and, finally, to the first branch of the fifth nerve. It was increased or caused by mastication, by deglutition, by talking, and by exposure to cold air. I could find no point of the face or mouth where firm pressure would either cause or inhibit the pain, neither was the stomach responsible; nor yet the teeth, most of which had, as usual in these cases, been relentlessly drawn.

In every such case as this one, where clearly no obvious local cause of pain can be made out, we are forced back upon two sets of measures—an effort to relieve the general nutritive defects which cause pain, and with this, or failing in this, a course of what is always more or less experimental therapeutics, that is, the use in turn of the various drugs like quinia, gelsemium, aconite, veratria, croton-chloral, and morphia—agents which alter the sensorial centres or the conductors in some such way as to lessen pain, and sometimes to do away with the cause of pain. It is hard to say succinctly more than this of these means, but, whatever be their value, it is increased or their use in some cases made needless by a long and thoroughly systematic effort to lift the general health above that level at which pain is one of the many evil probabilities. But these means had, in this instance, failed, and the various drugs used in neuralgia had had no better fortune, while, happily, my patient had escaped the habitual use of morphia.

I was unwilling to resort to the knife without a full trial of galvanism, which, in many supra-orbital neuralgias, is a most valuable agent, and, in some cases, is competent to effect absolute cures. In others, it merely relieves, but I have seen cases in which, although section of the nerve had failed, frequent and long use of galvanism afterwards triumphed.

Our patient was therefore put in bed, ordered to speak as little as possible, and was fed with food which demands no use of the teeth. Galvanism was used thrice a day for half an hour each time, the current being just enough to be distintly felt, since it is usual to find that more severe applications, save in the case of deep-seated nerves, do not answer as well as these milder currents. For a week the current was peripheral; then for a week we reversed it. If you were to ask why this was done, I should answer that, in my experience, it is sometimes indifferent as to what direction the current takes, but that sometimes it is not, and that nothing but a therapeutic experiment will decide the matter. In this present case galvanism proved utterly useless, and I was forced to the last resort of defeated therapeutics—the surgeon's knife.

Dr. T. G. Morton, one of the surgeons to this hospital, operated on the 31st day of May, 1881, entering the inferior maxillary canal with a small trephine at the point A of the diagram. In accordance with my request, the nerve was stretched, and then a half-inch exsected. I wished, also, to pull on the peripheral end so as after section to tear away as much of it as possible, but this was not done.

My desire to destroy so much of the nerve arose from a but too large knowledge of the ease with which cut nerves reunite. There was a wonderful illustration of this repair of nerves in a case of painful neuroma of the skin,[1] for the relief of which the late Dr. Maury exsected a portion of the nerves of the brachial plexus. Although the pain in that case was relieved for several months, within a year it became violent, and two years later was as severe as before. At the autopsy, six and a half years after the operation, the man being eighty-three years of age, the cut ends of the brachial plexus were found to have completely reunited. The connecting band was an inch and a half in length, remarkably strong and thick. This is a most notable fact, for while repair is rapid in the young, and very, very rapid in young animals, it has been generally supposed that the nerve ends would not reunite in old subjects.

It is important, therefore, to be careful to remove a large piece of the nerve, and, perhaps, it is almost as well simply to stretch the nerve as to cut out a piece of it. There is, in fact, no way, as yet tried, to prevent the extremities from reuniting, even doubling the ends over and pinning them back having failed in my experience. I have known cases where neither the second nor even the third division of a nerve has precluded the re-uniting of the ends. There is another case of mine on record where from one to three inches of the nerve was removed three times in succession, but where complete restoration took place. The fact that the inferior maxillary nerve runs in a canal, offers a better chance of permanent isolation of the peripheral end, and should I again have occasion to divide this nerve, I would make an effort to block the canal. I think this might readily be done by dissecting up a piece of

[1] Painful Neuroma of the Skin. Duhring. Amer. Journ. Med. Sciences, Oct., 1881.

the periosteum, and filling with it the bony canal, or by using carbolized sponge in the same manner.

When it becomes desirable to think of nerve-section or stretching, it is well to have a clear idea of why we are to resort to an operation. A distinct reason for it exists when it seems probable that the irritative cause lies in the periphery, and may, by operation, be cut off from the sensorium, which it disturbs; but also in cases where the cause is dubious or central alone, there may yet be two reasons for a section: First, because section or stretching in some way reacts on the centre so as to lessen its pain-making capacity; and, second, because in most old neuralgias of plainly central birth, the peripheral skin territories become sensitive, and are then easily played upon by external influences which in turn exasperate the abnormal centre and produce incessant attacks of pain.

It is well, also, to know in what nerve-filament the pain first started, since, in any view, that is the nerve to stretch. In the present case the pain had extended widely, in accordance with a law which seems to govern such cases—a law of diffusion of sensitiveness. At first one group of ganglia suffers, and then, as if the heightened capacity to cause pain were contagious, it is propagated to others, until at first near and then distant groups of cells are what I like to call sensitized, much as is seen in another fashion in tetanus.

It is my custom in all neuralgias to ask what causes pain and what lessens it. In a large number of cases, I am told that exposure to cold will bring on or increase an attack. Why cold air should have this effect, why it should be more hostile than heat, I cannot say. Nothing in medicine is, however, more sure than that, in certain maladies, the surfaces of the body acquire an increase of susceptibility to cold, and that a cool draught of air is competent to awaken or cause pain, as it is not in health. I showed years ago that in healthy birds, if we subject the naked skin to sudden chill we may cause the most remarkable phenomena in the way of convulsions or sleep, but in normal man, only the interior of the outer ear is able, on exposure to abrupt changes of temperature, to give us like phenomena. When, however, the centres have been irritated by disease, we seem to acquire an increased tendency to respond to atmospheric changes, so that in neuralgia, rheumatism, sclerosis, and the like, we become responsive in some way to impressions which are without notable influence on the healthy frame.

The period of time required for an abrupt cooling of the skin to occasion pain or other phenomena is another matter for thought. In some very sensitive cases a few moments suffice; in others the result follows after much longer periods. In birds, the vertiginous symptoms which follow the application of cold to limited skin-spaces require a certain length of time—from two to ten minutes. You will find, as a rule, in nearly all old neuralgias, wherever situated, that motion of parts concerned, and even of parts physiologically related to them will cause or increase the pain. In sciatic neuralgia, especially of neuritic or rheumatic birth, there is an obvious mechanical explanation of this in the pinching of the tender nerve, and it will be found that the effort of defecation and, more rarely, of urination, give rise to like results. In facial neuralgias the explanation is less easy, since in any fifth-nerve neuralgia, but most notably in that of the second and third branches, talking, chewing, laughing, and even deglutition cause or increase the pain. In these extreme cases, any sensation about the face, as a rough touch, or gentle friction, may be equally able to effect a like result; so that perhaps it is the awakening of the normal sensations which in all cases accompany physiological motor activities, which in some way arouses the morbid pain-making capacities of a hyperæsthetic sensorium. At all events these facts are found only in old and tenacious neuralgias. The pain is capable of being reproduced by almost any ordinary influence affecting the skin and also by almost any facial motor activity. You will see now and then cases in which severe but transient pain arises in certain people whenever they are abruptly exposed to great cold or to damp and cold.

Also, it is worth knowing that the steady use of moderate, stabile currents over and through the exit points of the fifth nerve is competent to relieve this condition; but in this and in the early stage of any facial neuralgia the first thing to think of is the patient's general condition. Cod-liver oil, tonics, and change of climate are of more value than all the violent drugs to which hasty therapeutists, driven by a sufferer impatient of pain, are apt to resort.

I wish to say a word about the teeth. In any neuralgia, have them looked over carefully by an expert, and let him not neglect to ascertain if there be a catarrhal trouble of the antrum; but never draw a sound tooth, or even a filled tooth, on no more evidence than the presence of a neuralgia. Bad teeth are rare causes of grave and persistent neuralgia.

When seeing many neuralgic cases, you will observe that the attacks come, by preference, at certain times of the day or night. For this there must be some distinct reason; but, as yet, the subject has been insufficiently studied, and regularity of attack is apt, without other reason, to induce the belief in a malarial cause; and since, in all fifth-nerve neuralgias especially, quinia is often a good remedy, the triumph of this drug is apt to be regarded as a fair confirmation of a theory which is certainly false in most instances.

As a rule, with many exceptions, fifth-nerve neuralgias are prone to recur early in the day or before noon, and sciatica to be worst at night, even if the patient be constantly in bed.

FIG. 1.

Shows the area of complete anæsthesia, surrounded by the zone of partial anæsthesia. The dotted lines indicate the corresponding areas in the mucous membrane of the lips and cheek.

In some cases, and before the disease is constant and the attacks frequent, and especially in stump and other traumatic neuralgias, the attacks are nearly all traceable to storms; but in others the chronal relations of such pain seem to be due to physiological laws which are as yet wrapped in complete mystery.

Sciatic neuralgias are more prone than others to be due to inflammatory states, and the tendency of these to be worse at night may well be related to the general

physiological law which gives rise to a normal elevation of temperature at night, and to a similar rise in the heat curve in fevers and in all states which give rise to febrile conditions. This is, however, but a more or less happy guess in regard to a problem most difficult of solution.

FIG. 2.

Shows the areas of complete and partial anæsthesia in the gums. The mucous membranes behind the teeth showed normal sensation. Section of inferior dental nerve at A. These diagrams were made twenty-seven hours after the neurectomy.

Dr. Morris Lewis examined the area of sensory disturbance before and after operation. Save for the slight hyperæsthesia, the neuralgia caused no change of moment, nor is it common to observe in these cases dysæsthesia. Dr. Lewis's diagrams represent the loss of pain sense within and without the mouth after the section by a dark space, and of loss of touch by a lighter one. These areas are somewhat smaller now than immediately after the neurectomy—a fact which I have often observed, and have elsewhere endeavored to explain.

It is to be observed that these sections are the only trustworthy means of obtaining a true surface map of the areas of nerve distribution; but, since surgeons are usually indifferent as to accurate study of such cases, we are still far from having profited as we might have done by neurectomy.

Our patient remains well at this date; but I should not be surprised were she to return to us with a reconstructed nerve and a renewal of the pain.

Two days ago, February 26, 1882, the patient again appeared at my clinic. She is entirely free from pain, and the area of insensibility is lessening. I was struck and interested to see that the chin muscles of the face on the left side were constantly quivering, and that they exhibited the electric reactions of muscles cut off from the centres. I was a little surprised at this, until our assistant physician to the hospital pointed out to me that the incision made to reach the nerve had been vertical, and that it had thus cut the lower branch of the seventh nerve, the filament which supplies the muscles of the chin.

ORIGINAL ARTICLES.

PREVENTIVE MANAGEMENT OF SMALL-POX.

BY WILLIAM H. FORD, M.D.,
OF PHILADELPHIA.

As there is no contagious disease whose prevention is so completely within human control as small-pox, it does at first sight seem strange that it should continue to commit its ravages among civilized people. Theoretically, nothing appears easier than its complete mastery and final utter eradication; but practically, the difficulties in the way of its suppression and radical extinction seem to be almost insurmountable. This results from the want of unanimity of sentiment with regard to the protective power of vaccination, from the absence of a general law requiring the vaccination of all persons, and its periodical repetition, and the lack of thorough and rigid application of other supplemental measures necessary to restrict the disease whenever it appears.

Universal vaccination is the main reliance in dealing with this dreaded plague; in fact, if this could be secured and maintained, there need be little or no recourse to other means of prevention. But as so desirable a result is not yet attainable, resort must be had to other measures which form an important and indispensable part of the preventive management of all contagious diseases.

Whenever a case of small-pox occurs, the chief and constant aim should be to prevent the communication of the disease to other persons. This is sought to be accomplished by prompt *notification* of the fact of the existence of the disease, by the *isolation* of the sick, by the use of *disinfectants*, and by the application of such *other measures* as tend to restrict the disease within the limits of its origin, to which allusion will hereafter be made.

Every case of small-pox should be promptly reported to the sanitary authorities, so soon as its nature is definitely determined. This duty is usually imposed upon the physician in attendance, or, when no physician is employed, upon the householder or responsible head of the family or institution where the case occurs. The law should fix the responsibility upon some one with such particularity that there can be no chance for evasion, and its violation should be made punishable by a heavy fine. The object of this notice is to afford the proper authorities the earliest opportunity for inquiring into all the circumstances connected with the origin of the disease, and the management of the patient and the premises, and for obtaining information on the questions of vaccination, attendance of children at school, and the relations of the case to the surrounding neighborhood, so that prompt and efficient measures can be instituted for restricting and preventing the spread of the disease.

It is absolutely indispensable, in the interests of the public health, that every case of small-pox should, from its very commencement, be completely isolated, either at home, or, when this is not practicable, in a hospital or some place specially prepared for the purpose. It is for the sanitary authorities to determine this question, and in exercising this function, every possible means of persuasion should be used to gain consent before the strong arm of the law is invoked, and the greatest care and caution should be observed in making the transfer in such a manner that the patient shall be exposed to the least possible risk to his health.

In the habitations of the poor, where there is always scarcity of space and a crowded condition

of the inmates; in dwellings where there is no place adapted for secluding the patient; in boarding-houses, hotels, public institutions, and places of general resort, such as dwellings connected with stores; or where the patient cannot be properly attended at home, either with regard to himself or the family, or both—there is unquestionably no doubt as to the propriety and duty of the prompt removal of the sick to a rendezvous or hospital specially prepared for such cases.

The isolation of the sick person implies his removal to a room most completely separated from every other part of the house—a veritable domestic quarantine. It should be well lighted, and well ventilated, and should have a fire-place, if possible, in which a fire should be kept constantly burning. All extraneous articles of furniture, carpets, and clothing should first be removed. The attendants should be chosen from among those who have had the disease, or who are protected by recent vaccination. No one should be permitted to have access to the apartment except those whose services are absolutely essential, and every precaution should be used with regard to cleanliness, disinfection of excreta, clothing, and everything in use in the room, so that there may be the least possible risk of spreading the infection. A sheet moistened with a strong solution of carbolic acid and suspended across the doorway, or in the passageway leading to it, is necessary to complete the isolation of the patient.

It is no longer considered admissible to treat cases of small-pox in general hospitals or public institutions, except in a separate pavilion isolated from the other buildings and managed under strict quarantine regulations; and even then this plan is objectionable, or account of the danger of multiplying the foci of contagion. Every town and city ought to be provided with a special place, either temporary or permanent, for the treatment of this disease in the event of its outbreak.

A law prohibiting the use of any kind of public conveyance whatsoever by a person affected with small-pox should be rigidly enforced, and its infringement should be made punishable by a heavy fine. In the event of such misuse of public vehicles, provision should be made for their speedy and thorough disinfection. Such a law necessitates the holding in readiness of special conveyances, or ambulances, for the transport of all persons affected with contagious diseases, and their use should be regulated by the health laws.

It is needless to say that every child, immediately upon the appearance of the first symptoms of small-pox, should be withdrawn from school, and its readmission should not be permitted without a properly attested certificate that it has entirely recovered, and that there is no longer any risk of its communicating the disease to others. Should there be other children in the family, they also should be required to leave school, though perfectly well, and should not be readmitted until provided with a similar certificate from a qualified sanitary officer stating clearly that the house is no longer infected, and that the danger of conveying the infection has ceased to exist. Only in very exceptional cases is it necessary to disband a school on account of small-pox having been discovered in some one or more of the pupils, since by properly performed vaccination, which should be an indispensible condition and prerequisite of admission to all schools, very general protection can be secured.

The inmates of an infected house should, so far as is practicable, cease to associate with the public, and their attendance at church, public entertainments, and assemblages of any kind, should be strictly interdicted. It would be advisable, if at all practicable, to have the well remove from the house, provided it is done early, and before there is any danger of thus communicating the disease.

The public ought to be apprised of the special locality where small-pox exists, lest they unknowingly expose themselves to the risk of contracting the sickness. How to accomplish this object without creating unnecessary public alarm, is a problem not so easily solved. It has been the custom in some places to placard the infected house with a conspicuous notice of the fact, but this plan has excited considerable opposition. The decision of the question might be left to every city or town to determine by its own experience. To depend upon the inmates of the house to warn all those who approach it, is trusting too much to the weak and selfish part of human nature. To have recourse to sanitary espionage, would be attended with the best results, if practicable, and not too expensive a procedure. It must be admitted, on the other hand, that the more rigid, harsh, and embarrassing the special requirements, the stronger the temptation and inducement for concealment of the disease. Better, perhaps, would be the plan of keeping the premises under general sanitary supervision, by occasional visits of officers qualified to advise and direct the observance of all prudential measures, and clothed with authority to institute more arbitrary and restrictive regulations as a penalty for non-compliance.

No public funeral should ever be permitted in these cases, and public notice of the cause of death should always be required.

No obligation to the patient or his friends is required of the physician to keep the nature of the disease a secret; on the contrary, by so doing he bemeans his profession, and dishonors himself in that he wrongs the public by pandering to the selfish interests of the few.

After death, the interment of the body, without an assemblage, as speedily as is possible consistent with propriety, should be the invariable rule; and once buried, the body should not be permitted to be disinterred, except after a lapse of time sufficient to preclude any possibility of infection therefrom; and even then this act should never be performed except under authorization and supervision of the local sanitary authority.

Another and most important means of restricting the spread of small-pox is disinfection, which consists in the destruction of the germs of the disease. The early, free, and constant use of disinfectants is a necessary part of the prophylactic treatment of every case of this disorder. In a certain sense, fresh air and sunlight may be considered disinfect-

ants; hence, there should be the freest ventilation of the room and house consistent with the safety of the patient. A fire upon the hearth contributes much to the active circulation of the air of the room. There should be the most scrupulous cleanliness with regard to the patient, attendants, bedding, and everything about the apartment. Everything from and about the patient should be promptly and thoroughly disinfected throughout the progress of the disease, and after its termination. This can be accomplished by burning, by thorough boiling, by exposure for a considerable length of time to dry heat of a temperature of 240° to 250° Fahr., and by the use of volatile and liquid chemical agents. At a temperature of 250° Fahr. some articles of clothing are apt to be scorched. A lower degree of temperature will probably answer the purpose of purification, if the articles are exposed to it for several hours, or for a sufficient length of time to insure the penetration of the heat to every part of the fabric; but it should never be lower than 220° Fahr. All the discharges from the patient should be received in a vessel containing some reliable disinfectant, such as a solution of two pounds of sulphate of iron, or of two fluidounces of chloride of zinc, or of four fluidounces of strong carbolic acid in a gallon of water, and thereafter immediately removed. When there are no sewers, the discharges from the patient, after thorough disinfection, should be deeply buried in the ground, far from the house and the source of water supply. Small articles, when soiled, should be burned, and the bed and body linen, when removed from the patient, steeped in the zinc or carbolic-acid solution above mentioned, and afterward boiled in water by themselves. The discharges from the nose and mouth may be conveniently received in a vessel charged with the chloride or carbolate of lime. To prevent the passage into the air of detached particles of infectious matter from the surface of the body of the patient, it is advisable to use inunctions of camphorated oil, or of sweet oil impregnated with carbolic acid, or of carbolated glycerine, to be applied daily to the whole surface of the body. It is very doubtful if the poisonous quality of the little particles floating in the air is at all affected by the amount of disinfection that it is safe to practise in the sick-room. There is, however, no objection to the use of chloride of lime or of the carbolic acid spray. But as aerial disinfection is practically of little value, the main dependence must be placed on free ventilation, cleanliness, and thorough disinfection, as already suggested. Food and drink that has been in the sick-room should not be used by other persons. The attendants should make free and constant use of disinfectants in cleaning their hands and articles in use by the patient, and nothing should be permitted to leave the room before first having been subjected to some form of disinfection. Every sink, water-closet, and privy-well in use during the sickness should be daily disinfected by the free application of some one of the above-named solutions, preferably that of the sulphate of iron, on account of its cheapness.

The clothing worn by attendants should be of such material as can be readily washed. Should it become necessary for an attendant to leave the house, a bath should first be taken, the hands, face, and hair being carefully cleansed with carbolic acid soap, and then only such clothing should be used as has not been exposed to infection. Subsequently, a free exposure in the open air is a wise precaution. Physicians cannot be too guarded in their attentions to themselves when attending a case of small-pox, as they are just as liable as other persons in attendance upon the sick to communicate the disease, and they should, therefore, as far as practicable, adopt the same precautions. A linen duster put on before entering the sick-room, and well buttoned up around the neck, will do much to protect the clothing from infection, and this should be hung up in the open air, after use, until the subsequent visit. The washing of the hands in carbolated water before leaving the house should not be neglected, as also the practice of exposure for a considerable time in the open air immediately after each visit. Before associating with other persons it would be well to first return home and remove all outer clothing, which should be hung up in the air for several hours. The thorough washing of the hands, face, and hair is also advisable.

The isolation of the patient should be continued for at least three weeks, or until all the scabs are removed and the skin is entirely smooth; and he should not even then mingle with other persons until after having taken a number of baths with the use of carbolic acid soap, and put on clothing that has not been exposed to infection.

After death or the removal of the patient, all articles of no value should be immediately burned, and everything in the room should at once be treated with a view to the complete destruction of the germs of the disease. This is to be accomplished by the use of the zinc or carbolic-acid solution above mentioned for steeping clothing,[1] washing floors, walls, and furniture. Wall-paper should be removed by moistening with the carbolic-acid solution. Heavy clothing, beds, bedding, and other articles which cannot be washed without injury, should be spread out in the room so as to be freely exposed to the influence of fumigation. Then, after closing all the doors and other openings as tightly as possible, the room and its contents should be fumigated by burning sulphur in an iron dish, set in a vessel containing a little water, and kept closed for about twenty-four hours. At the end of this time, the room should be well aired for several days by throwing open the windows, and then the ceiling should be whitewashed, and the walls repapered or whitewashed. This work, to be effectual, should be supervised by a competent officer of the Board of Health. For the purpose of fumigation it has been estimated that 2 pounds of sulphur will be required for every 1000 cubic feet of air-space.

The manner of treating infected conveyances and railway carriages is similar to that advised for infected rooms. They should be fumigated with sulphur, the wood-work washed with solutions of zinc

[1] For this purpose the National Board of Health recommends a solution made by dissolving four ounces of sulphate of zinc and two ounces of common salt in a gallon of water.

or carbolic acid, the cushions and stuffed furniture baked, and then beaten and exposed for a considerable time in the open air.

Often it happens that there are no facilities for carrying out many of these requirements, and in such cases the aid of the local authorities is of the utmost value. Some suitable place should be provided for disinfecting, at a nominal cost, all portable articles, particularly such as cannot be conveniently or satisfactorily cleansed and disinfected at home, such as stuffed furniture, beds and bedding, woollen clothing, and the like. Such articles could then be removed, with due precaution, in a wagon specially prepared for the purpose; those of no value being burned in a furnace, and the remainder, after being cleansed and thoroughly disinfected by steam, dry heat, or by chemical agents, according to circumstances, returned to the owners. This plan will prevent serious embarrassment, and will ensure a more complete purification than can be expected under ordinary circumstances, and its general observance will unquestionably do much towards the preservation of the public health. The city of Philadelphia has such a disinfecting service, and its benefits have been clearly proved by an experience of several years.

When a person dies of small-pox, the body should be washed with a solution of carbolic acid or of chloride of zinc, of double the strength of that indicated above, and enveloped in a sheet saturated with the same solution, and placed in the coffin as soon as possible. A metallic coffin, hermetically sealed, is preferable to all others; especially is this the case when the corpse has to be transported to a considerable distance. It need not be added that no public funeral should be permitted, and that burial should take place with the least possible delay.

TREATMENT OF SMALL-POX.

BY W. M. WELCH, M.D.,
PHYSICIAN TO THE MUNICIPAL (SMALL-POX) HOSPITAL, PHILADELPHIA.

IN discussing the treatment of small-pox, it will be found convenient to divide the disease into six stages, as follows: *1. The Stage of Incubation; 2. The Initial Stage; 3. The Eruptive Stage; 4. The Stage of Suppuration; 5. The Stage of Retrogression, or Stadium Exsiccationis; 6. Convalescence.*

1. The Stage of Incubation.—When the date of infection can be clearly determined, this is found to be a stage not very variable as to time. In most cases sickening occurs on the eleventh or twelfth day, and the eruption appears on the thirteenth or fourteenth day after exposure. During this interval very much can be done to prevent or modify the disease. For this purpose drugs, however, are useless; likewise, no dependence can be placed upon diet or hygienic measures. But it is to vaccination we must look to accomplish either one or the other of the desired results.

My experience does not agree with that of Curschmann,[1] in that he has not been able to prevent variola, nor even render its course milder, by vaccination during the stage of incubation. On the contrary, I have in numerous instances been able to afford perfect protection against variola, and have many times seen the disease markedly modified by vaccination after undoubted infection. In order, however, that protection shall be complete, it is necessary that vaccination be not too long delayed after exposure to the contagion. If the vesicle has reached maturity—the areola being well-formed—and the infected person has not yet sickened, the chances then for perfect protection are very good. But if sickening occurs a little in advance of this stage of the vaccine vesicle, so that the areola and the small-pox eruption appear about the same time, we then have reasonable ground for hope that the disease may be modified. Contrary to the rule, I think I have seen vaccination, in some rare instances, exert a modifying influence over small-pox when the eruption has appeared before the vaccinia had reached the stage of the formation of the areola; so that vaccination should always be performed, even though considerable time has elapsed since exposure. Usually, however, it will be found if the vaccination has been done somewhat late, that the vaccine vesicle and the variola eruption will develop side by side, without the former exerting any modifying influence over the latter.

Some years ago, I published[1] a brief clinical history of fifty cases, in which primary vaccination was done on various days during the stage of incubation of small-pox, and as my subsequent observations bear out the same general facts then stated, I will submit a short analysis of those cases. Of the fifty cases, ten were perfectly protected, three very nearly so, eleven partially protected, and twenty-six unprotected. Of the eleven partially protected, only one died, and that one was an infant only a few days old, and of premature birth. Of the twenty-six unprotected, fifteen died. Among those partially protected, the average length of time which intervened between the performance of the vaccination and the appearance of the variola eruption was 8.9 days; among those in which there was no protection, it was 6.9 days.

I wish to call especial attention to the fact that the vaccinations in the above cases were all primary. When a person has once been vaccinated, and there is a partial return of susceptibility to small-pox, protection after infection can be more readily accomplished by revaccination than where the vaccination is primary. The reason of this is not difficult of explanation. It is simply because revaccination develops and runs its course more quickly than does unmodified vaccinia, and hence, protection is more speedily brought about.

In order either to confer immunity, or to give the best possible protection against small-pox by vaccination during the stage of incubation, it is of vital importance that the lymph used should be fresh and active. For performing vaccination under such circumstances, my experience leads me to prefer humanized lymph, and that, too, somewhat remotely

[1] Author of article on Small-pox and Vaccination, Cyclopædia of the Practice of Medicine, Zeimssen.

[1] Philadelphia Medical Times, Feb. 17, 1877.

removed from the cow. The fifty cases of which I have spoken came under observation during the epidemic of small-pox in 1871–72, and were all vaccinated with lymph of long humanization. During the present epidemic, I have in almost all primary vaccinations failed to confer immunity against the disease after infection by the use of animal lymph. This is not because vaccinia induced by animal lymph possesses less prophylactic power, but because the course of the process is slower—the areola usually being two or three days later in appearing. The lymph, therefore, which produces the most rapid development of the vesicle and areola is to be preferred in times of imminent danger, as during the incubation of small-pox.

When there is good reason to believe that so much time has elapsed since exposure that it would be impossible to confer protection to any degree by vaccination, inoculation, were it allowable, might, perhaps, be practised with advantage. I have had, however, no experience in the use of this measure, and, consequently, cannot recommend it from any personal knowledge of its value. Besides the legal objection to the operation, there is the difficulty of determining the precise time at which infection occurs, and without this knowledge it would be impossible to say of any case that it is too late to expect protection from vaccination. While it would be reasonable to suppose that vaccination performed one week after exposure to the variola contagion would fail to exert any prophylactic power against the disease, yet such does not always prove to be the case. Quite recently a mother and her four children were admitted to the Municipal Hospital, the mother having small-pox at the seventh day of the eruption; three of the children were unprotected by vaccination, and the other, a girl aged eight years, had been vaccinated in infancy. All four of the children were at once vaccinated. The girl previously vaccinated took well-marked vaccinoid, and enjoyed immunity against small-pox. The other three children took vaccinia; of these, one was perfectly protected, one had an exceedingly mild form of varioloid, and the other unfortunately suffered from unmodified small-pox, and died. I might add that these vaccinations were done with humanized lymph of long descent, which was kindly furnished me by my friend, Dr. S. N. Troth, the senior vaccine physician of this City, who has preserved, with great care, the old stock of virus in use in this country prior to the introduction of animal lymph, in the year 1870.

2. *The Initial Stage.*—This stage usually comprises a period of two or three days. After what has already been said, it would be needless to enter into any argument to show that vaccination is useless at this stage of small-pox. The hypodermic injection of vaccine lymph has been suggested, and its claims urged, particularly by Furley;[1] but that it is wholly devoid of prophylactic power, I have had ample opportunity to prove.

All attempts to cut short the disease prove unavailing. Bloodletting, formerly much employed, is now almost never used, even for the relief of symptoms. Large doses of quinia during the stage of invasion has been thought to exert a favorable influence over the course of the disease, but Curschmann's large experience shows that it possesses no such value. In short, we can do nothing more at this stage than treat special symptoms.

The popular idea of ages ago still prevails to some extent that it is necessary to keep the patient hot and sweating, and not unfrequently it is found quite difficult to overcome this prejudice. A room well ventilated and having a temperature of 65° to 70° Fahr. is best suited to the comfort of the patient. Febrifuge mixtures, such as liquor ammoniæ acetatis, liquor potassæ citratis, tinctura aconiti, etc., may be given in suitable doses and at stated intervals. If there is much irritability of the stomach, the effervescing citrate of potassa may be preferable. When the temperature is high, sponging with cool water is serviceable. Severe headache, attended with a flushed face, may be met by the application of cold water, iced compresses, or the ice-bag to the head. For the irritability of the stomach, swallowing of small pieces of ice will sometimes give relief; subnitrate of bismuth is also of service. The nervous symptoms, such as insomnia, delirium, and convulsions, may be relieved by chloral hydrate and bromide of potassium, given either separately or combined. For the convulsions of children, chloral is especially serviceable. To relieve the pain in the back, which is often intense, Dover's powder, when the stomach is retentive, may be given. Gentle cathartics may of course be administered whenever indicated.

I would strongly advise against the application of mustard to the back for the relief of pain, to the epigastrium for the relief of nausea and vomiting, or to any other locality for any purpose whatsoever, because of the increase of eruption which it is sure to invite to that particular locality. I have frequently seen the eruption rendered excessively confluent on certain parts of the body by the application of sinapisms during the initial stage, and that, too, without the eruption anywhere else being diminished. This result is not peculiar to the action of mustard, but may be produced by any irritant or injury, and is doubtless due to the increase of capillary circulation which is thus artificially or accidentally brought about.

During this stage, the best beverages are cold water and iced lemonade. The diet should be light and easy of digestion.

3. *The Eruptive Stage.*—By this stage is meant the period beginning with the first appearance of the characteristic eruption, and continuing until complete pustulation has occurred. The duration of this period in variola vera is usually about seven or eight days. The great desideratum at this stage of the disease is a remedy which will control or modify the eruption, since danger is greatly dependent upon the quantity of the eruption and the long and tedious course which it pursues. It was thought that the antiseptic or antizymotic class of remedies would meet this indication, but after a full and fair trial, I think, concerning their alleged

[1] Lancet, May 25, 1872.

efficacy, the verdict *not proven* must be pronounced against them.

During the epidemic of 1871–72, I subjected seven cases of unmodified small-pox to the use of sulpho-carbolate of soda; the dose administered was twenty grains every three or four hours. The result was so discouraging that I abandoned the drug, for not one of the number recovered. Of the seven cases, four began taking the sulpho-carbolate on the second day of the eruption; of these, one lived three days; one, five days; one, eight days, and the other fifteen days. Two began its use on the fourth day of the eruption; of these, one lived two days, and the other three days. One began its use on the fifth day of the eruption, and lived twenty-one days. It is true, these were all very severe cases—all of them confluent, and some malignant. But they certainly represent a class of cases requiring specific treatment, were any such treatment known.

But my experience with antiseptic drugs is not limited to sulpho-carbolate of soda. I have also used salicylic acid, salicylate of sodium, and carbolic acid, the latter both internally and externally, but with results no more encouraging than those which followed the use of sulpho-carbolate of soda. With xylol I have had no experience.

Having decided negatively the question of specifics, it only remains for us to treat this stage of the disease, as the previous one, by regulating the condition of the patient, and giving attention to special symptoms as they arise. The febrile symptoms, which usually remit to a considerable degree after the appearance of the eruption, may, when present, be met by the remedies previously indicated. It sometimes happens in a depressed condition of the system that the surface of the body is cool, particularly the extremities, and that the eruption is slow in appearing. In such cases, the application of heat to the extremities, and the administration of hot stimulating drinks—hot toddy, for instance—may be of service. For the convulsions which frequently occur in children at the early part of this stage, a warm bath and hydrate of chloral, particularly the latter, given either by the mouth or rectum, have been found especially serviceable. Bromide of potassium may also be used. For the sore throat which now commonly appears, because of the eruption attacking the mucous membrane of the mouth and fauces, mouth washes and gargles, containing either chlorate of potassa, biborate of soda, glycerole of tannin, etc., may be used. Small pieces of ice allowed to dissolve in the mouth, and acidulated drinks, are often very gratifying to the patient.

During this stage persistent insomnia and violent delirium often occur, and for their relief large doses of chloral and bromide of potassium are sometimes required. In administering chloral, it is well to remember that it is very irritating to the throat, and, therefore, requires to be largely diluted; or it may be given by the rectum, if thought preferable. When this condition of the patient is attended by a flushed face and bounding pulse, a brisk cathartic may be of service. Tartar emetic and sulphate of morphia combined in doses of one-eighth to one-half grain each, will sometimes produce sleep and quiet the delirium.

Not unfrequently the patient in his delirium becomes so violent, and sometimes manifests a suicidal tendency so strongly marked, that it is found necessary, both for the safety of the patient and the protection of the nurse, to make use of some artificial means of restraint. I have known strong and muscular patients in this state of mind to knock down the nurse, jump out of the window, and make their escape. I have also known suicide to have been committed while the attention of the nurse was directed to another patient. In order, therefore, to guard against such accidents, we are in the habit of using in the Municipal Hospital for this class of patients, a wide band made of stout webbing or canvas, loosely placed over the chest and fastened to each side of the bed. Smaller bands made of the same material and lined with chamois skin are buckled on the wrists and ankles and also made fast to the bed, allowing, however, a little motion of the limbs, so that the patient shall not be subjected to painful restraint. By this appliance we are able to confine the patient to bed securely, without doing him any personal injury.

With the view of preventing or relieving the excessive burning and itching, particularly of the face, forearms, and hands, some ointment, such as cold cream or cosmoline, may be used. My preference is olive oil and lime-water in equal parts. This mixture may be perfumed with cologne water if thought necessary, and applied from time to time with a large camel's-hair brush. Cloths wet with cool water and spread over the face and arms sometimes afford relief. The development of the eruption within the hard skin of the palms of the hands, tips of the fingers, and soles of the feet, not unfrequently give rise to excruciating pain. For this distressing symptom very great comfort may be found in the prolonged use of lukewarm hand- and foot-baths. Or the frequent application of flannel cloths wrung out in tolerably hot water is of great service.

Patients suffering from the hæmorrhagic type of small-pox usually die during this stage. I know of no treatment that possesses any power against this form of the disease; for in my large experience I have never seen a well-marked case recover. I have tried antiseptics, large doses of quinia, iron in different forms, and ergot, without seeing any appreciable good effects.

The most suitable diet at this stage of the disease is a liquid or soft diet. It should, however, be nutritious, as the patient has yet to pass through a severe ordeal in which his power of endurance will be severely tested. In varioloid the appetite during the eruptive stage is often good; such patients require but little treatment, and may be allowed almost perfect freedom in choice of diet.

4. *The Stage of Suppuration.*—The duration of this stage may be said to be from two to five days. It is at this period of the disease that the eruption reaches its greatest development; that the suppurative, irritative, or so-called secondary fever occurs; that the mucous membrane of the mouth, fauces,

and larynx, become most dangerously involved; that the vital powers of the patient are most severely tested, and his life placed in the greatest jeopardy. The indications, then, for treatment are to relieve the dangerous throat symptoms when they occur, to mitigate the fever, and to resist by every available means the tendency to death by exhaustion. For if life can be prolonged through this stage of disease, the chances for recovery then daily increase.

The throat symptoms are rarely entirely absent, even in varioloid; but in confluent variola the eruption upon the mucous membrane of the mouth and fauces is usually also confluent, and often diphtheritic. Mouth-washes and astringent gargles are, therefore, indicated. As such, a solution of chlorate of potassa, alum, or borax may be used. If there is fetor of the breath, carbolic acid may be added; or diluted chlorine-water may prove of service. Curschmann prefers a weak solution of liq. ferri sesquichlor.

To relieve the pain and difficulty of swallowing, small pieces of ice held in the mouth and allowed to dissolve slowly are often of great benefit. Iced lemonade and mucilaginous drinks, particularly flaxseed tea containing sugar and lemon juice, are usually very grateful to the palate. The ice-bag applied to the neck is often of very great service. On the contrary, some patients are benefited more by hot applications. Should œdema of the glottis occur, an emetic may be given if the patient is not too weak to bear its action, or we may resort to local scarification.

When the eruption in the fauces and larynx assumes the diphtheritic condition all the distressing symptoms peculiar to diphtheritic croup are developed; the local remedies to be made use of for this condition are, of course, quite similar to those recommended for the latter disease. In addition to some of the measures already suggested, steam, inhalations of hot water or of water and vinegar mixed, may be of service; likewise the vapor from slaking lime is sometimes useful. Lime-water in the form of spray has proved serviceable. Also spray-inhalations of lactic acid (grs. xx. to ℥i.) may be tried. When suffocation threatens, tracheotomy may be employed.

During the period of suppurative or irritative fever of confluent variola the temperature usually ranges from 102° to 106° Fahr. Any measure, therefore, capable of reducing the temperature will prove of great benefit to the patient. Quinia in large doses has been recommended, but I have not found it of very great service. Cool immersion baths have been tried and not found very satisfactory; besides the difficulty of getting the patient in and out of the baths, they do not afford much relief. Cold compresses and cool water squeezed from a sponge over portions of the body, are more easy of application and are sometimes serviceable. I have seen patients benefited in warm weather by being covered with a sheet wrung out in cool water and renewed from time to time, but such applications are usually not well borne in cold weather.

The suppuration which takes place at this stage of confluent variola from the innumerable pustules spread over almost all parts of the body is certainly very abundant. Watson says the quantity of pus thus produced amounts to quarts. This excessive drain upon the system and the extensive cutaneous irritation combine to exhaust the strength of the patient, and consequently a vigorously supporting plan of treatment is required. A plan of treatment aiming to supply nutriment equal to the loss sustained through the suppurative process, was presented as long ago as 1856 by Dr. Nebinger,[1] and very appropriately named by him "Compensative Nutritive Treatment." Dr. Nebinger writes:

"In carrying out this treatment, I have not found any diet so useful, so grateful to the patient, or any which gave as little inconvenience to swallow, when the mouth, fauces, and throat were studded with pustules, as a combination of eggs, milk, sugar, and ice, made in the proportion of one egg well beaten, half a pint of milk, sugar and ice in quantities suited to the taste and desire of the patient. When the necessity for stimuli has existed, as it does in all cases of the confluent variety of small-pox, I have added brandy, or, what I think better, Monongahela whiskey, because for purity it can be more safely relied on, and can be more readily obtained. The quantity of this diet which I direct the patient to use in confluent small-pox is half a pint, or a tumblerful, with a large tablespoonful, or half an ounce, of Monongahela whiskey added to it, every two hours or every hour and a half *during the day and night.* I have frequently had patients to take as many as twelve eggs, three quarts of good new milk, and eight ounces of whiskey daily for several consecutive days; and yet, with all this supporting and stimulating diet, this most excellent proteine or highly nitrogenized food, these poor fellows barely escaped sinking into the grave, some of them having had (notwithstanding they were so vigorously supported with food, and so actively stimulated) that peculiar feebleness and tremor which is always the unmistakable evidence of a breaking up of the vital forces—the threatenings of dissolution."

My treatment at this stage of the disease, so far as nutriment and stimulants are concerned, has been almost identical with that of Dr. Nebinger. I have never given, however, as many as twelve eggs to one patient in twenty-four hours. To an adult patient suffering from very abundant eruption, I direct that there shall be given every twenty-four hours from two to three quarts of milk, from one to two pints of beef-tea, from two to four eggs, and from six to twelve ounces of whiskey, the latter being given in the form of milk-punch. The eggs may be well beaten and drank with the milk (a little salt being added), or they may be given in the form of egg-nog. It is important that the nutriment should be given at short intervals, and by night as well as by day.

Tonics are also indicated. I am in the habit of using quinia in doses of two grains every three or four hours. Digitalis is often of great service to steady the heart's action. Cathartics should be avoided at this stage. Where there is constipation, a laxative may be given, or, what is preferable, an enema may be administered.

The local treatment of the skin does not require to be materially different from that already indi-

[1] Variola; its Nature and Treatment. (Read before the Philadelphia County Medical Society.)

cated for the third stage of the disease. When the odor is disagreeable, as it is very apt to be at the latter part of this stage and the beginning of the next, carbolic acid may be added to the mixture of olive oil and lime-water (x.–xx. gtts. ad ℥i.). When there is a strong dislike to carbolic acid some other disinfectant may be substituted. At the period of the disease just referred to, the odor is often horribly offensive. Very much can be done towards correcting this condition by spraying frequently the face and arms, and even the bedclothing, of the patient with a five-per-cent. solution of either carbolic acid or Labarraque's liquid. Bromo-chloralum and Platt's chlorides may, in suitable dilution, be used in the same way.

In order to disinfect the atmosphere of the room, fresh air is of first importance, though care must be taken to prevent a draft of air from blowing directly on the patient, especially during the decline of the eruption. Chloride of lime is commonly placed about the room by the family, and may be of some service. I am in the habit of suspending in the room a large cloth wrung out in a solution of carbolic acid (Calvert's No. 4), or liquor sodæ chlorinatæ, in the proportion of an ounce of either of these to a quart of water. Care should be taken not to overcharge the atmosphere of the room with the odors of the disinfectants, the object being simply to correct the bad odor and render the atmosphere more agreeable to the patient and attendants.

5. *The Stage of Retrogression or Stadium Exsiccationis.*—This stage is characterized by the drying of the eruption. It may be said to begin about the eleventh, twelfth, or thirteenth day, and it runs very gradually into the stage of convalescence. During the early part of this period of the disease, the treatment marked out for the previous stage should be continued. When the patient shows marked indications of improvement, the quantity of milk, eggs, and whiskey may be gradually diminished, and soft or solid food substituted. The tonic doses of quinia should be continued, and the muriated tincture of iron may also be given with advantage. Of course, the applications to the skin and the disinfectants should be continued as long as required.

When complications occur, it is usually at this stage of the disease that they make their appearance. The most common complication is corneal ulcer. When this is observed early, I have seen good results follow the use of the solid stick of nitrate of silver —it being brought to a fine point, and applied very delicately. Solution of atropia should then be instilled in the eye, and hot compresses applied. It often happens, however, that the ulcerative action cannot be arrested by any treatment, but marches rapidly on to complete destruction of the cornea, and iritis, and sometimes suppuration of the globe follow. Pneumonia or pleurisy occurs perhaps next in frequency. Their treatment should be conducted on general principles, except that bloodletting, general or local, is not warrantable.

6. *Convalescence.*—During convalescence, a general tonic treatment may be demanded. Very often, however, little or no medication is required, the patient having a good, even voracious appetite, and rapidly regains flesh and strength. But not unfrequently sequelæ appear at this stage and greatly protract convalescence. Of these, the most common are boils and multiple abscesses. Their treatment requires the application of hot fomentations until suppuration is established, and then the free use of the lancet. When these furuncular processes are numerous, and continue to be reproduced for a long time, I have seen good results follow the administration of Fowler's solution.

Erysipelas, also, not uncommonly occurs—more frequently, doubtless, in hospital than in private practice. The affection is usually amenable to the ordinary treatment: that is to say, thirty drops of muriated tincture of iron, repeated every three hours, and the external use of diluted lead-water, are very promptly followed by favorable results.

Night-sweats are sometimes complained of, and when they occur, may be successfully treated by aromatic sulphuric acid, atropia or belladonna. The latter is often especially serviceable.

When decrustation is slow in taking place, glycerine or cosmoline may be applied. Warm baths, frequently employed, very greatly assist the falling off of the crusts. After the removal of the scabs, we can do nothing to remedy the cicatrices; but sometimes warty nodules are left on the face, which may be benefited by painting them with tincture of iodine.

Patients who have recovered from small-pox should not be permitted to mingle with other persons until all the scabs have been removed, for these latter doubtless contain the contagion of the disease.

The Prevention of Pitting.—The question how to prevent pitting in small-pox has taxed the ingenuity of physicians of all ages. Various methods have been recommended—some, indeed, highly lauded—but I think the judgment of those who have had the greatest opportunities for observation will bear out the statement that the end aimed at is never attended with certainty. In order to accomplish this end it is necessary that the eruption should be checked in its course before it has reached the pustular stage; for the suppurative process is attended with destruction of derm tissue, and then cicatrization and cicatrices must inevitably follow.

All the methods most highly recommended have, in my hands, failed to produce any satisfactory results. I have never been able to make any decided impression on the eruption by the application of mercurial ointment. I have tried tincture of iodine locally in the papular stage of the eruption, and find that it not only fails to modify its course, but aggravates the inflammatory action of the skin. The evacuation and cauterization of the vesicles have not, in my experience, been followed by any very decided benefit; at any rate, the procedure is only practicable in mild cases, where there is the least danger of pitting. I cannot too strongly condemn the application of collodion or solution of gutta-percha, as they form an impermeable coating, prevent exhalation from the skin, and consequently greatly increase the suffering of the patient. I have about come to the conclusion that Gregory was not far wrong when he said, "There is no peculiar

method which can be devised for the prevention of pits and scars. The masks and ointments formerly in use for that purpose, and so highly vaunted, are, in reality, more hurtful than beneficial. The application of a little cold cream to the hardened scabs is all that can be recommended."

HOSPITAL NOTES.

PHILADELPHIA HOSPITAL.

(Service of J. William White, M.D.)

RUPTURE OF THE URETHRA FOLLOWED BY EXTENSIVE INFILTRATION OF URINE.

(Reported by C. J. Seltzer, M.D.)

Andrew O., æt. forty-one, married, a pedler, was admitted into the wards of the Philadelphia Hospital January 24, very much exhausted and in stupor. No reliable history could be obtained from him further than that he had been drunk for some time up to six days before admission, during which six days he was lying in the condition he presented when admitted, and that he had but little medical attendance during that time.

The following was his condition after entering the ward: Pulse 120 to 130, rapid and feeble, intermittent, and at times almost imperceptible at the wrist. Respiration irregular, labored, and between 30 and 40 per minute. The breath had a peculiar sweetish odor. Tongue was pointed, dry, and brown. Teeth and lips covered with sordes. Examination of what the patient supposed to be hæmorrhoids showed a large slough in the right gluteal region, surrounded by numerous small abscesses and sinuses.

The perineum was very much swollen and distended, but no distinct fluctuation could be obtained. The inflammation and swelling extended from the anus to the scrotum, the latter but slightly involved. There was also a large ischio-rectal abscess. Pressure upon the perineum caused the urine to flow from a sinus, extending towards the rectum, but not communicating with any cavity, as far as could be ascertained.

A small flexible rubber catheter was introduced into the urethra to the depth of eight inches, meeting with no resistance. The bloody and purulent character of the urine, and the increased flow when pressure was made over the perineum, indicated that the catheter entered a false passage and not the bladder. The urine contained a large quantity of pus. In withdrawing the catheter, the urine continued to flow from it until about five inches of the catheter remained, when it ceased abruptly. Sensation had almost entirely disappeared from the affected parts.

After the administration of whiskey and digitalis at short intervals, the patient revived to some extent. Pulse became less frequent and stronger; respiration better. After careful etherization the patient was placed upon the operating-table in the lithotomy position, and perineal section performed by Dr. White. A metallic catheter having been introduced, a linear and deep incision was made into the centre of the perineum. A cavity filled with urine and pus was laid open, and its contents evacuated. The end of the catheter was found in this cavity, having passed out from the urethra on the right side between the spongy and cavernous bodies, and thence into the cavity between the bladder and rectum.

A catheter of small size was now passed into the bladder, and a large quantity of urine drawn off. The sloughing tissues were removed, sinuses and abscesses laid open, and a charcoal poultice applied. Stimulants were freely administered, and external heat applied. The catheter was retained, and the urine drawn off at intervals during the day.

The tissues from the scrotum to the rectum were discolored and gangrenous. Whether the abscesses existed before he went under treatment, or before infiltration of urine took place, it is impossible to say, since no history of his condition previous to admission could be obtained; but, as will be seen from the autopsy, it is probable that a false passage had been made during attempts at catheterization previous to his admission.

After the operation, and when the effects of the ether had passed off, the patient was able to answer a few questions about his condition as to pain or discomfort, and sensation was also re-established to some extent. Eight or ten hours after the operation coma returned and became profound, and remained so until death, which took place thirty hours after.

The following was the *post-mortem* condition: Upon laying open the abdomen, the surface of the intestines and wall of abdomen were found to be normal, as was also the liver; but when an attempt was made to remove the intestines, they were found bound down upon the right side by old, firm, and strong adhesions. Numerous cavities filled with pus existed throughout this region, and the surrounding tissues were matted and saturated with purulent fluid. The principal cavity was external to the kidney, between it and the peritoneum. This tract extended from the right kidney into the pelvis, in the course of and surrounding the ureter of that side. The pelvic cavity was filled with purulent fluid. The kidneys themselves were very much enlarged and white, and showed, microscopically, evidence of extensive parenchymatous nephritis. The left contained a little pus. Both ureters were dilated and enlarged, with thickened coats. The dilatation was greatest about the centre; the right more so than the left. The pelvic organs were also bound together by old adhesions. Neither of the cavities found in the abdomen had distinct or well-defined walls.

The bladder was very much hypertrophied and dilated, the mucous membrane lining it thickened and forming ridges which ran in various directions. The orifices of the ureters were enlarged and opened straight into the bladder.

An abscess seated in the middle lobe of the prostate communicated with similar ones in the lateral lobes. Pus also escaped from the follicles in the membranous urethra. Collections of pus were found in the tissues beneath the pubes and in front of the triangular ligament, also in the bulb.

By laying open the urethra its entire length two strictures were found; one, two and a half inches from the meatus, and the other five inches. Numerous lacerations in the first stricture showed that it had been forcibly dilated. This stricture was a membranous contraction, without any induration whatever. The second stricture was of an entirely different character, being indurated and hard to the touch, seven-eighths of an inch in depth, and situated in the spongy urethra, extending almost to the beginning of the membranous portion. Several fibrous bands crossed in the course of the stricture. Between this stricture and the bladder the urethra was unbroken, though slightly dilated.

The rupture took place at the beginning of the second stricture, on the right side, and entered the perineum between the corpus spongiosum and corpus cavernosum, five inches from the meatus urinarius. The principal cavity in the perineum extended from the seat of rupture, posteriorly, almost to the rectum. The bulb was dissected out by the infiltration, so that when the cavity was laid open it was entirely exposed to view. The cavity was almost completely upon the right side—the side upon which the rupture occurred.

MEDICAL PROGRESS.

TRICHINOSIS.—In a recent instructive lecture on the subject of trichinosis M. GERMAIN SÉE distinguished four clinical types under which the symptoms may manifest themselves. The first is the gastro-intestinal form, in which the affected individuals are seized with grave digestive troubles without apparent cause, epigastric discomfort and sense of distention, nausea, and vomiting. The times of the vomiting vary; sometimes they occur on the day on which the trichinous food was taken, sometimes they are delayed for four or five days. The vomiting is usually accompanied with diarrhœa, sometimes choleriform in character. Such symptoms, if slight, may be readily mistaken for a simple indigestion. If the nature of the disease is, however, suspected, the diagnosis may readily be made by the discovery of the entozoa in the stools. When the diarrhœa is excessive the symptoms may resemble those of cholera, but two distinctive characteristics are the excessive perspirations and considerable muscular prostration, which may even precede the onset of the diarrhœa. In the second, or rheumatoid form, muscular pains are the dominant symptom; muscular exertion is painful, and causes fatigue. Towards the eighth day the muscles become swollen, hard, and tender, and the flexors are always more affected than the extensors, and from the swelling of the muscles, shortening, and even a flexor contracture, may result. Painful trismus or difficult deglutition may be the effect of the presence of the trichinæ in the muscles of the jaw and pharynx, and the affection of the laryngeal muscles may change the voice, and that of the intercostals and diaphragm may cause a painful dyspnœa. With these are spontaneous pains, often severe, irregular in distribution, not corresponding to the course of the nerves, and constantly mistaken for rheumatism. In this form, also, there are usually initial gastro-intestinal troubles, which (as well as the prostration) should always arouse suspicion. The third and most characteristic is the œdematous form. The patients make their appearance with swollen faces, particularly the eyelids, and they complain of extreme prostration. The swelling may be bilateral or unilateral, and in the latter case is pathognomonic. This œdema, with normal heart and urine, with muscular prostration and initial gastro-intestinal troubles, should leave the diagnosis in little doubt. The last is the typhoid form, between which and enteric fever there are several analogies. There is continuous fever, considerable prostration, some dyspnœa, and much muscular pain. Three distinctive symptoms, however, are the profuse sweating, the œdema of the face, which is present in nine out of ten cases of trichinosis, and the brief duration of the pyrexia, which ceases although the other symptoms persist. The last is the gravest form, and death may occur in the second or third week with delirium or stupor, and the general aspect of a severe case of typhoid disease.—*Lancet*, Feb. 11, 1882.

AN ANTISEPTIC FOR INSTRUMENTS.—Dr. MATHEWS DUNCAN states that salicylic cream, composed of one part of the acid to four or five of glycerine or vaseline, is a valuable means of keeping sponges, tents, instruments, etc., aseptic in the vagina. It was first suggested by Dr. Ogsten, of Aberdeen.

TREATMENT OF RINGWORM.—In order to prevent the spreading of ringworm by contagion, and when occurring in children to prevent their losing their school hours by being kept at home, Dr. THIN recommends the covering of the head with an ointment. He reports a case in which for two months the patches were kept covered with fat melted with a sufficient quantity of white wax to give the mixture consistence at the temperature of the skin. During these two months the patches of ringworm remained absolutely stationary. The spread of the disease was at once arrested, although the spores present in the diseased hair-follicles still retained their vitality. The boy had a brother and two sisters, under the age of puberty, with whom he had constant intercourse, and no precautions were taken beyond his wearing a cotton skull-cap; but none of the others took the disease then or afterwards, when stimulating ointments were applied in order to effect a cure. —*Lancet*, Feb. 11, 1882.

CONGENITAL SACRAL FISTULÆ.—An interesting discussion occurred at a recent meeting of the Paris Société de Chirurgie on a point in teratology, which has attracted but little attention, viz., the curious congenital fistulæ which are met with in the neighborhood of the sacrum. M. TERILLON described three cases of this condition, and noted the occurrence, in connection with these fistulæ, of inflammation due to the accumulation of sebaceous material, just as inflammation from the same cause occurs at the umbilicus. In one case the fistula passed up to the bone of the sacrum, which was, however, not exposed. The matter which escaped from the opening contained much fat and squamous epithelium. After excision the walls were found to have a structure similar to that of the skin. M. FÉRÉ has examined a large number of children with reference to this question, and found in several a small depression in the corresponding position, and in two there was an actual cul-de-sac, about half a centimetre deep. Two hypotheses were put forward respecting the origin of these cavities. One regards them as an incomplete spina bifida, but against this is the fact of the integrity of the vertebral arches. According to the other theory, these fistulæ are relics of the "posterior umbilicus;" but authorities are by no means agreed as to the situation of this, some placing it in the middle of the vertebral column, others towards its lower part. M. DESPRÈS mentioned an instance of congenital tumor containing epithelial cells situated in this region. The frequency with which a caudal appendage or a tuft of hair was found in the neighborhood of these fistulæ was insisted on by M. GUÉNIOT. Similar cases were mentioned by CHAUVEL and POZZI, but no additional evidence was adduced as to their nature.—*Lancet*, Feb. 11, 1882.

INFLAMMATORY ENLARGEMENT OF BONES.—Mr. C. J. SYMONDS from a paper on this subject concludes: 1. That ostitis, even when central, is only attended with enlargement when the periosteum is involved. 2. That in all cases of primary synovial disease of joints, or of caries of articular surfaces, with secondary synovial disease, there is no enlargement of the bone. 3. That the enlargement of joint-ends in these cases is only apparent, and is explained by the unnatural prominence of the femoral condyles, owing to wasting of the thigh and to the thickening of the ligaments and synovial membrane. 4. That all inflammatory increase in the size of bones is due to periosteal formation, and that the uniformly cancellated appearance is due (*a*) to the widening from absorption of the spaces in the compact layer, whereby it becomes indistinguishable from the original cancellous tissue and the porous periosteal bone; and (*b*) to the remodelling of the compact layer when the ostitis has been superficial. 5. That the term "expansion" is misleading as applied to the results of the inflammatory processes in bone, since the widening of the spaces is an absorptive one.—*Lancet*, Feb. 11, 1882.

CHLOROFORM MORTALITY.—The number of deaths at present occurring from the administration of chloro-

form is so startling, that it is arresting public not less than professional attention. On Wednesday week last one of these fatalities occurred at Malvern Wells, and is a fair specimen of many more. The patient, Charles Holmes, a man fifty-one years of age, consulted Mr. Haynes for dislocation of the shoulder. Mr. Haynes tried the usual modes of practice for reducing the dislocation without anæsthesia, but did not succeed, and, failing, determined to reduce under chloroform. He took every reasonable precaution before carrying out this intention. The examination of the heart gave no indication of disease, and there was no obvious reason why the narcotic should not be employed. It was also used with due care, but during the second degree of muscular excitement the patient became collapsed, and rapidly died. The *post mortem*, conducted by Mr. H. J. Brown, of Worcester, revealed "long-standing structural disease," fatty degenerative change, we presume, of all the vital organs; so that "the man might have died at any moment." The class of case here presented is typical. There is a large population of this kind, a population of men and women, but of men especially, who, without presenting, even to skilled observation, their precise state, are liable to die at any moment. They die from slight mental shocks; they die from comparatively slight physical shocks; they die under efforts to run or climb; they often die in attempting to catch the train against time; they die in the most ready manner under certain of the anæsthetics. It is probable they are in danger under any of the anæsthetics which are as yet known, but it is certain that they are in great danger under every one of the class that belongs to the chlorine family. The chlorine, which really has nothing to do with the production of the anæsthesia, for that depends on the organic radical with which it is in combination, is the cause of the danger. It acts as an irritant. It produces sudden contraction of arterial fibre, arterial shock, by which the course of blood through the pulmonary and systemic circuits is impeded, and the feeble heart, unable to meet the difficulty, is arrested in its action during the second degree of anæsthetic sleep. The practical lessons to be remembered on this very solemn subject are always deserving of mention. In the first place, there can be no doubt that when any suspicion exists that life is not at its best, and that the heart is feeble, ether should take the place of chloroform. Ether relaxes, and for a case of dislocation is singularly superior to chloroform. If the administration of ether is, for any reason, not practicable in the class of case to which we refer, then the chloroform administration should be preceded by a full dose of some agent that has the relaxing effect of ether, and that agent we have at hand in ethylic alcohol. From one to two ounces of pure alcohol—specific gravity 830—is a valuable preliminary, and should be given diluted in eight ounces of water from five to ten minutes before the inhalation of the narcotic is commenced. With these precautions, the dangers of anæsthesia may be greatly reduced; and they ought to be rigidly followed until the time comes when science shall give to us a new agent that, with all the facilities of chloroform, in respect of convenient and ready administration, shall combine the safety, with something more than safety, of anhydrous ether.—*Lancet*, Feb. 11, 1882.

Sore Nipples.—Dr. Favre (*Petersburg. Med. Woch.*, Jan. 28), distinguishes two kinds of this lesion—fissures and erosions—and, believing that the latter are much induced by the modern tight-fitting dresses and the pressure of the corset, warns pregnant women against this mode of procedure. As a means of treatment he recommends the sprinkling the sores with bismuth, or employing this as an ointment, in the proportion of two drachms to half an ounce of vaseline. In some cases, twenty-four hours' application of this means has removed all suffering, and allowed suckling to be resumed.—*Med. Times and Gaz.*, Feb. 11, 1882.

Hydrophobia Treated with Pilocarpine.—To prevent the multiplied trials of useless drugs, it is well to note the unsuccessful use of remedies in hydrophobia. A case in Paris has been reported in *La France Médicale*, in which pilocarpine was employed without apparently retarding for a moment the fatal result. The patient was a man, aged thirty-eight, who was bitten on the 23d of February by a rabid dog. The wound, which was situated on the hand, was cauterized by carbolic acid, and cicatrized slowly. For two months no symptoms appeared. Then a dull pain seemed to start from the wound and to ascend the arm to the shoulder and trunk. Two days later the first paroxysms occurred, and the disease ran a rapid course, with its customary symptoms. Six injections of pilocarpine were given, two centigrammes in each, and caused abundant salivation and less copious diaphoresis. When the effect of each was over, the patient experienced a notable relief to his sufferings; but the course of the malady appeared to be altogether uninfluenced. The salivation which was produced by the later injections was attended by terrible paroxysms of suffocation, followed, however, by distinct relief. The loss of liquid occasioned by the treatment increased the thirst; but deglutition was impossible. A tube was therefore passed down the œsophagus, and as much liquid as possible introduced into the stomach. The operation was well borne and, on repetition, the patient himself introduced the tube. Forty-eight hours after the commencement of the treatment the patient died suddenly. He was sitting on his bed, talking, when his head sank forward on his chest, he gave one or two inspirations, and was dead. Sudden death from cardiac failure is too common in hydrophobia for the result to be ascribed with certainty to the pilocarpine, but it should teach caution in the use of so depressing an agent in the disease.—*Lancet*, Jan. 21, 1882.

Scrofula and Tuberculosis.—M. Grancher recently made to the Société Médicale des Hôpitaux of Paris an interesting communication on the above subject. The following are his general conclusions: 1. Tubercle is a fibro-caseous neoplasm, the development of which takes place in successive stages, during a longer or shorter period; this complete evolution may be accomplished in a few months, or it may last throughout the whole of life. It may, however, be arrested during the earlier stages, and never get beyond them. 2. Pathological anatomy and experimental pathology are to-day agreed to include under the term tuberculosis the greater number of affections called scrofulous, as *local* tuberculoses. 3. Lupus and superficial inflammations of skin and mucous membranes, the last resort of those who persist in regarding scrofula and tuberculosis as distinct, will probably be included in the same order in due process of time. 4. The necessities of practical medicine, which, after all, must first be reckoned with, do not permit all tubercular affections to be confounded together; on this account it is convenient to retain the word "scrofula" for those tubercular affections which are very slight and generally curable.—*Med. Times and Gaz.*, Feb. 11, 1882.

Iodide of Lithium.—Prof. Deisse recommends the administration of iodide of lithium in the form of pills, in cases of syphilis, where iodine is indicated but where the idiosyncrasy of the patient prevents the use of iodide of potassium or the other ordinary iodine preparations. His formula is as follows: ℞. Iodide of

lithium gr. 23½, powder and extract of quassia enough to make 20 pills. One pill to be taken in the morning and evening. Iodide of lithium is very hygroscopic and must, therefore, be kept in closed boxes.—*Wien. Med. Zeitung.*, Jan. 21, 1882.

TREATMENT OF SEVERE EPISTAXIS.—Dr. THÉODOR ROTH recommends, in cases of epistaxis sufficiently severe and prolonged to endanger life, the use of acetate of lead associated with opium, administered in the following form:

Sub. Acetate of Lead,	. .	0.12 centigramme.
Opium,	. . . . .	0.01 "

A powder to be taken every two hours.

The author adds that three grammes of acetate of lead, and 0.40 centigrammes of opium, should be taken in three days in order to obtain a complete cure.—*Rev. Mens. de Laryngologie, D' Otol. et de Rhin.*, Jan. 1, 1882.

TOXIC ACTION OF SALIVA.—M. GRIFFINI has undertaken to repeat the experiments of MM. Pasteur and Vulpian on the toxic action of saliva injected under the skin, and has communicated an article on the subject to the *Archivio per le Scienze Mediche*, t. v. He obtained both pure parotidean and mixed saliva, and injected both fluids beneath the skin in rabbits. He believes that pure parotidean saliva is perfectly inoffensive, that ordinary mixed saliva filtered through porous plates, so as completely to prevent the passage of microbia, does not produce any local gangrenous changes, but a general infection of the blood, resembling in all essential respects septicæmia. He has satisfied himself that it is the saliva, and not the microbia that it contains, which produces the septicæmic condition. Mixed unfiltered saliva contains much more toxic constituents, due probably to commencing putrefaction or to fermentation in the buccal cavity; hence, when this is subcutaneously injected, gangrenous complications occur with necrosis of the tissues and ordinary septic accidents due to the resorption of gangrenous products. M. Griffini considers that his experiments prove that the toxic action of saliva is due to a non-organized ferment.—*Lancet*, Feb. 18, 1882.

THE ETIOLOGY OF SCARLATINA.—Dr. EKLUND, of Stockholm, has for several years devoted much time to the study of the pathology and etiology of scarlatina, which is constantly present in the Swedish capital, and rarely absent from the barracks and other dwellings on the Isle of Skeppsholm. The results at which he has arrived cannot fail, if confirmed by other observers, to be of the highest practical importance as solving the connection, too frequently seen to be ignored or explained away, between bad drainage or other insanitary conditions and outbreaks of scarlatina, which otherwise must be admitted to have been produced spontaneously—*i. e.*, without actual infection. In the urine of persons suffering from scarlatina, he has constantly found a prodigious number of discoid corpuscles, oval or round, their diameter being less than $\frac{1}{1000}$ millimetre, or from a thirtieth to a tenth of that of a red blood-cell. They are colorless or yellowish-white, surrounded by a distinct cell-wall, and containing a well-defined nucleus of a deeper hue; sometimes one or more nucleoli may be seen. They exhibit rotatory or oscillatory movements, especially when a drop of water is added to the fluid. They multiply themselves, as he has frequently observed, by fission, first of the nucleolus, next of the nucleus, and finally of the entire cell. He cannot say whether they develop into a mycelium; at any rate, the presence of fine filaments seems to be exceptional. He has never seen them to adhere in moniliform chains nor massed as zooglœa. He considers them to be veritable *schizomycetes*, and proposes the name of *plax scindens*. But Dr. Eklund most positively asserts that he has found these identical organisms in vast numbers in the soil and ground water of the Isle of Skeppsholm; in the mud from the trenches dug for the water-mains; and among the greenish moulds of the walls of the old barracks, where scarlatina was most rife. Nay, more, he alleges cases of scarlatina occurring in children after drinking milk mixed with the ground water of the island, and one case which followed on immersion in one of these trenches, and the drying of the child's clothes in a small room. In still another case, scarlatina broke out in a block immediately on the exposure of the ground water by excavations around. Other observers have found micrococci in the animal fluids in scarlatina, but, even if they were shown to be invariably present in the disease, it would not prove that they were its cause. Still less can the connection of the extra-corporeal organisms with scarlatina be demonstrated by anything short of direct verification, by inoculation into a healthy body, carefully isolated from all other sources of infection. It is the absence of this last condition of scientific precision, which casts a doubt on all conclusions drawn from accidental, or, as Mr. Simon would say, popular experiments.—*Med. Times and Gaz.*, Jan. 28, 1882.

THE NERVE-ELEMENT IN WHOOPING-COUGH.—Of late years the profession has bestowed very little, if any, serious scientific attention on some of the commonest of common maladies. Whooping-cough is conspicuously among the neglected ills to which, notwithstanding the forgetfulness of the multitude of earnest clinical investigators, flesh is still heir. Many years ago the nerve-element in this troublesome and too often evil-working, if not in itself dangerous, affection, engaged much consideration, and treatment was specially directed to its relief. It would be well if the investigation of this feature of the etiology of the affection could be resumed. The fact that pertussis belongs to the class of maladies which are communicable and "catching" does not take it out of the range of probability that the specific action of a morbific poison on the nerve centres may be the efficient cause of the disease. Although the occurrence of the affection happening rarely more than once in the life of any individual may seem to point more directly to the fertilizing of latent germs in the organism than to any special excitation of the nerve centres, we do not, as yet, know enough of the *modus operandi* of morbific influences—"germs," or poisons, as we call them—in the blood and the tissues to define the part which the nerve centres play in the production of morbid phenomena. In any case, such relief is frequently obtained even in the earliest stages of whooping-cough from mild periodic counter-irritation over the whole length of the spinal column by a mustard poultice, which merely reddens the skin without vesication, that it would be well worth while to study this method closely from the therapeutic as well as the clinical standpoint. It certainly does good; but how? In cases where the mustard poultice, applied for six or eight minutes—not longer—over the whole length of the spine immediately before putting the child to bed every night, for a week, or, in seriously spasmodic cases, a fortnight, does not procure a permanent amelioration of the cough, the effect of this remedy is enhanced by sponging the spine with iced water quickly each successive morning. In cases where the paroxysms of cough seem to be repeated and to continue from sheer exhaustion of the nerve centres, coffee, administered as a drink, will often stimulate the energy of the centres, so as to put an end to the malady. These are practical points which require theoretical explanation.—*Lancet*, Jan. 28, 1882.

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SATURDAY, MARCH 11, 1882.

NEPHRECTOMY.

WE considered last week the subject of nephrotomy, but nephrectomy, or extirpation of the kidney, is so recent and so promising an operation, that it deserves a few words, especially as the first number of our weekly issue contained a notable case by Dr. T. Gaillard Thomas.

As America led in ovariotomy, so it has the honor of the first two cases of nephrectomy (though undesigned) by Wolcott, in 1861, and Peaslee, in 1868. But the first deliberate and intentional operation was done by Simon, in 1869. His work *Die Chirurgie der Nieren*, Martin's paper in Langenbeck's *Archiv.*, for 1879, Torres' Thesis, *Des Calculs des Reins*, Barker's two papers in the *Medico-Chirurgical Transactions*, for 1880 and 1881, Kroner's in the *Archiv. f. Gynäkol.*, vol. xvii., and several papers by Czerny and others in the *Transactions of the London International Congress of 1881*, with the reports of the various cases published from time to time in the *American Journal of the Medical Sciences*, are the best sources of information up to the present time. Czerny reports 74 cases, to which must be added one each by Thomas and Burgess, making 76 cases in all. Of these 10 are American and 66 foreign. How rapid has been the growth of the operation in favor, may be seen by the fact that up to 1875 Nepveu had collected only 14 cases, in 1880 Barker reported 28, and now we have 76. Czerny himself up to last August had operated 13 times with 7 successes.

One great fear had been that on the removal of one kidney the increased vascular pressure and extra work thrown upon the other, would induce disease, and especially albuminuria. Simon's careful preliminary experiments on dogs, confirmed by those of Torres, made this improbable, and the results of the now numerous operations in man have entirely dissipated this fear. The other kidney undergoes simply a compensatory hypertrophy. Moreover, no uræmia has followed, except in a few cases of absence or destruction of the other kidney, no hypertrophy of the heart, no shock from vaso-motor disturbance by a ligature so near the solar plexus and the aorta, in fact, no extraordinary effects whatever. The dangers are precisely those of ordinary surgical operations—no more, no less—and, in corroboration of the assertion of Torres, which we quoted last week, Thomas is undoubtedly right in saying, "that the operation is now one of the recognized and legitimate procedures of surgery."

It has been repeatedly performed on children, in one case at eleven months of age, and even, by Gilmore, successfully at the fifth month of pregnancy, without producing abortion.

It is not a little surprising to see how frequently a painful floating kidney has necessitated the operation, while neoplasms, fistulæ of the ureter, calculi, hydro- and pyo-nephrosis, and other similar conditions, at times, have led to it.

The question of the lumbar *vs.* the abdominal incision, is perhaps at present quite as important as that of diagnosis, and it is in the selection of suitable cases, and the appreciation of the conditions favorable to the one or the other method of operation, that immediate improvement of the operation lies. Floating kidneys and very large tumors, such as have been so frequently mistaken for ovarian or other tumors, can generally be removed most successfully by the anterior incision, and in this class most cystic, encephaloid, and other similar neoplasms, will be found. Moreover, the greater readiness of access to any neighboring diseased glands which ought to be removed, is an additional argument for this method. Czerny, however, in one case, reported by Braun, made a lateral incision, nine inches long, from the sacro lumbalis parallel to the border of the ribs, and was able to remove the tumor without wounding the peritoneum—a method which deserves future trial. On the other hand, if the perinephritic tissue be much thickened, and many adhesions have already been formed, the lumbar incision offers manifest advantages, both in access to the kidney and its vessels, and the operation is simplified by a simple enucleation of the organ from its capsule, leaving the inflammatory products behind, thus not interfering with the peritoneum. So, too, with smaller neoplasms, in which the glands are not yet probably involved, and in cases of pyo-nephrosis and calculus pyelitis, and of fistulæ between the ureter and internal organs, the kidney in this case being healthy and easily removed from its capsule.

The cases on the border line must be most carefully studied and reported, and with such care, we believe that nephrectomy will follow the improving path of ovariotomy to equal surgical triumphs.

Resection of a rib has been done in two cases in order to give greater room. Czerny once resected the eleventh and once the twelfth rib, both successfully. Barker, however, has shown that it adds little to the advantages of the operation and Dumreicher in prolonging his incision to what he took to be the twelfth rib, really reached the eleventh (the twelfth being rudimentary), opened the pleura and death followed from collapse of the lung.

The results thus far have been encouraging for so new and so serious an operation. Of the 76 cases 40 have recovered, 33 died, and 3 were under treatment. The results of the two methods of operation are, on the whole, largely in favor of the lumbar operation, doubtless from the nature of the cases suitable to it. The lumbar operations number 38 with 14 deaths, 36 per cent.; the ventral 33 with 19 deaths, 60 per cent. In 5 cases the result is yet undecided or the incision not stated. The mortality of the abdominal operations is, however, increased unduly by the fact that about half of them were undertaken with a false diagnosis. Not a few of them were unsuitable for operation and would not have been interfered with had the real nature of the case been understood.

THE PHYSIOLOGY OF THE SPLEEN.

IN spite of the numerous and valuable studies of which the spleen has been the subject, its function, with that of the other so-called ductless lymphatic glands, still remains involved in considerable obscurity. Its inclusion in the group of blood-making organs has been established beyond doubt, and Schönfeld and Tarschanoff have described its periodic changes in bulk, a relation being found by the former between changes in volume and changes in blood-making activity, while the latter, as well as Setschenoff and Sabinsky, have traced the relations between the size of the organ and various conditions of nerve influence. Some recent studies undertaken by Dr. Chas. S. Roy, on the characteristics of the normal splenic circulation, and the vaso-motor mechanism of the organ, published in the *Journal of Physiology*, January, 1882, promise to throw considerable light on this subject.

Dr. Roy's method consists in enclosing the spleen in a rigid metal box, of appropriate shape, filled with oil, and of such a construction that, while no hinderance is offered to the entrance and exit of blood by the splenic arteries and veins, any change in the volume of the organ causes a rise or fall, corresponding in extent, of a recording lever writing upon the moving paper of the kymographion.

Dr. Roy finds that the spleen is continuously contracting with a rhythm which, in so far as the element of time is concerned, is remarkably constant, averaging about sixty contractions an hour in the case both of dogs and cats. The extent or volume of the splenic systole is, however, subject to great variations. For although no pulse wave is evident, and only slight indications of a respiratory wave, the force of the muscular contractions, and hence the quantity of blood expelled from the spleen vary considerably. It is also interesting to note that, even when the general blood-pressure in the organ is greatly diminished, as by closure of the aorta, there is only a partial reproduction of the change in the spleen volume, indicating that the passages by which the blood enters the spleen are comparatively narrow, and that the mass of blood in the organ is practically cut off from the arterial system, and that, therefore, the circulation through the organ must be carried on almost exclusively by the rhythmical contraction of the smooth muscular fibres of the splenic capsule and trabeculæ, and not by the general blood-pressure. These experiments, therefore, indicate the existence in the spleen of a function hitherto unsuspected: that of propulsion of its own circulation; while they also show that the splenic systole may be an important element in the maintenance of the portal circulation.

As regards the vaso-motor mechanism of the spleen, Dr. Roy finds that stimulation of the vaso-motor centre, as by asphyxia, or direct stimulation, as has been pointed out by Tarschanoff and Setschenoff, causes a rapid contraction of the spleen, which Dr. Roy shows is not due exclusively to a contraction of the walls of the arterioles, but also to the contraction of the special muscular fibres of the organ. Reflex stimulation of the vaso-motor centre by stimulation of the central end of a sensory nerve, even after division of the splanchnics and vagi, produces analogous results, as also follow stimulation of the peripheral end of either splanchnic or vagus, though there does not appear to be any splenic vaso-motor "*tonus*" passing along these nerves, as their section is not followed by an expansion of the organ. These results also show that there must be a fifth path for the vaso-constrictor influences from the cerebro-spinal centres; and since section of the vagi and splanchnics does not interfere with the splenic rhythm, there must be some special mechanism in the organ itself by which its systole and diastole are regulated.

The importance of these investigations, and particularly the value of his method, is evident, and we trust soon to see the publication of his results on the action of different substances in the blood on the splenic circulation, as well as his deductions as to the bearing of these observations on the general physiology of the spleen.

THE PUBLIC INFLUENCE OF THE MEDICAL PROFESSION.

A PROFESSION so numerous, so well educated, and of such social and personal influence as ours, ought to exert a telling influence in questions affecting the public health. That it does not, is only too certain and too well known.

The reason why it does not is evident even to a superficial observer. No organized public effort is made to give voice to the opinions of those best qualified to direct municipal, State, or national action in such matters. Our medical societies hold their meetings privately, uninvaded by the otherwise ubiquitous reporter. No matter how valuable and striking the paper that is read, not the faintest echo is heard in the daily press, and yet it may be pregnant with truths the people should know, and treat of evils that are to be remedied, not by private admonition to individual patients, but by public legislation by bodies made up of non-medical men. Only in the medical journals are such papers published, read only by medical men, and then forgotten in the rush and hurry of the daily bread-winning work. Of course, we would not advocate the publication in the lay press of most professional papers. Not to speak of the seeming seeking for notoriety which often might fall into charlatanism, the object of such communications is chiefly our own instruction, and their subjects are often either unfit for general reading or uninteresting from their technicality. But we see the greatest propriety and advantage in giving publicity through the daily press to papers whose object is the destruction of municipal abuses that affect the public health, such as the condition of our streets and of our sewerage systems; the introduction of reforms, such as public supervision of house-drainage and plumbing; the prevention of diseases, such as small-pox, syphilis, and scarlet fever; the improvement of present methods of life in dress, food, nursing, bathing, care of the sick, care of children; the influence of school-life in the health of our millions of public and private school children, and many other subjects that will occur to our readers. On all or nearly all of these, the profession which knows most about them, nay, almost the only one which knows really anything about them, has no more public influence than so many lawyers, ministers, or merchants.

We hope, however, that better days are at hand. The action of the Philadelphia County Medical Society, in investigating the eyesight of our public-school children, and the pending public action on legislation as to syphilis, are steps in the right direction; while our brethren in New York, under the potent influence of Dr. Fordyce Barker, have also taken steps to make their influence felt. When the streets of that city last winter were active breeders of pestilence—and in what large American city are they not?—the voice of the medical profession, assembled as was eminently proper in a public meeting, was lifted in protest; and but a few weeks ago the *Tribune* gave an account, three columns long, of the meeting of the Academy of Medicine, at which Mr. C. F. Wingate, a Sanitary Engineer, read a paper on "Practical Points in Plumbing," followed by a discussion by Drs. Barker, Doremus, Parker, Janeway, and others.

Massachusetts, too, has destroyed the ancient abuses of the coroner, and has substituted the admirable system of medical examiners, chiefly through the influence exerted by the medical profession and the vigorous efforts of the *Boston Medical and Surgical Journal.*

We hope these good examples are but the forerunners of vigorous action. Not as theorists in speculations as to the influence of germs or malaria, not as Don Quixotes riding at every municipal windmill, but as thoroughly practical men, with the burden of the public weal upon our shoulders, surrounded by evil habits, evil traditions, evil modes of life, which it is our duty to better, let us speak, and speak loudly, and speak until we are heard.

Until some such public expression is given to the united opinion of the profession, we can do but little towards improving the public health and destroying the crying evils that exist on every hand. Not till then shall we do our duty as medical men to the public that will hear us if we will but make ourselves heard.

A SURGICAL MILLENNIUM.

IN the last volume of the *Medico-Chirurgical Transactions*, Mr. Spencer Wells gives the brief histories of two hundred cases of ovariotomy, completing one thousand cases upon which he has operated! A history like this is so novel that it deserves more than a mere statement. It is rare for any surgeon to do even a thousand ordinary operations, but a thousand operations such as ovariotomy, put him in a category apart from his fellows.

America anticipated him in the inception and early practice of ovariotomy, and Philadelphia and New York had no mean share in perfecting the operation; but we must all confess that to-day ovariotomy owes more to Spencer Wells than to any other one man. This one operation will make him famous for all time.

A review of such a useful life must be an immense and abiding satisfaction to him. He can well answer Mr. Mallock's question "Is life worth living?" His head never rests upon his pillow without the blessings of hundreds whose lives have been spared through his skill, and of thousands in whose hearts and homes he has made the noon-day sun to shine again. Twenty odd years ago, when he reported

his first modest roll of five cases, the ovariotomist was considered by many as an ogre, a murderer, deserving of indictment by law, a surgical pariah. But Mr. Wells has lived to see seven hundred and sixty-nine women snatched from the grave, and restored to useful and happy lives, the operation firmly established, and the mortality fall in his own hands from 34 to 11 per cent., and with a few operators even to 3 per cent. On the basis of the expectation of life of these one thousand patients, according to the English Life Insurance tables, Mr. Wells has added an aggregate of 17,880 years to human life; or considering only those who have recovered, he has given them 22,880 years of average health and happiness instead of the 3080 years of suffering and sorrow, which they would have had without the operation of ovariotomy. What a benefactor such a man is to the human race! What an ornament to his time, his country, and his profession! *Serus in cœlum redeat!*

It is to be hoped, in the interests of science and of medical progress, that the anti-vivisectionists will continue in their present course of indiscriminate and illogical attack upon every prominent member of the profession against whom they can find or invent a pretext for directing their puerile abuse. After having picked up Mr. Jonathan Hutchinson on a charge of allowing a case of pemphigus to remain three days without active treatment, in order that it might thereby be made more instructive to the students, and having dropped him rather precipitately as being intellectually too warm for their handling, they have now flooded the papers with silly trash about the "unnecessary" experiments with aconitine upon mice, made by Drs. Dupré and Stevenson, in the Lamson case. As a London contemporary remarks, the grievance is not the cruelty of the practice, but the audacity of science "in venturing to do that in a questioning spirit which every housemaid is thought justified in doing under the plea of convenience, cowardice, or caprice."

Argument is wasted upon such persons, and vituperation would reduce us to their level. "Come, then, expressive silence!"

We are gratified to learn, from the London medical journals, that the authorities have refused to comply with the demand of the counsel of "Dr." Lamson, the defendant in the now celebrated aconite poisoning case, that an analyst might, on the part of the prisoner, examine the viscera of the deceased. Our gratification is due, not to any ill-will towards the accused, although there is abundant evidence that he was, to put it mildly, an unqualified and unscrupulous practitioner, but to the fact that the principle involved is that which underlies the whole system of medical expert evidence. Professional testimony in all cases, and especially in those implicating human life, should be given neither for defence nor prosecution, but at the request and for the benefit of the court, and by men of such known skill and probity that their statements as to technical points will be unquestioned. To the present system of employing medical men as partisan witnesses, is due much of the popular opprobrium cast upon the profession, the members of which certainly never appear to less advantage, or inspire less confidence, than when contradicting one another in the witness-box. Our own self-respect should urge us to advocate a change, and to approve such action as the court has taken in this case.

At the last meeting of the College of Physicians of Philadelphia, the most recent acquisition of the Mütter Museum, a series of twenty-four coronal sections of the brain, was exhibited, and elicited great interest and admiration. They proceed regularly from the anterior to the posterior surface of the brain. Each is beautifully mounted in a circular glass cell on a square plate of glass, so that both surfaces of each section or slab of the brain are visible, and the whole series is contained in a handsome locked case. The sections are preserved by Müller's fluid, and mounted in carbolized glycerin jelly, and are prevented from disturbance by a spring of whalebone, which gives gentle support. The preparations are the work of Dr. H. D. Schmidt, of New Orleans, and reflect the greatest credit upon his skill. They will be of especial value to students of the anatomy and physiology of the brain, and in locating any of its lesions in disease. The physicians and medical students of the city should be more familiar with the many and accumulating treasures of the Mütter Museum.

"My wife," said Rev. Dr. Robert Collyer, at a recent meeting of the Brooklyn Maternity, "my wife is a prudent woman, and never praises me to my face, but she would tell you, I know, that as a nurse I am worth 80,000 trained nurses rolled into one." Aside from the preposterous exaggeration, the fact is that Dr. Collyer is *not* as good as a properly trained nurse. A husband, a wife, a daughter, may be moved by their deep affection to the utmost fidelity, but faithfulness can never replace knowledge. Indeed it is high time that the public should appreciate the fact that such earnest affection is generally a serious bar to the best service; for the greater the love the greater the anxiety, and the greater the anxiety the less the judgment, and on good judgment the patient's life may depend. A conscientious nurse will be as faithful as the most loving husband, and will have what he cannot have,

even if he "has had nine children," as the papers make Dr. Collyer say he has, and that is the trained eye and ear and hand, and above even them the skill and tact founded on teaching as well as experience. Nice appreciation of a patient's wants and needs and dangers require an unbiassed mind. Hence doctors rarely attend their own families, and hence skilled nurses are better than the best amateurs.

We are glad to learn that at the March meeting of the College of Physicians, it was definitely determined to establish a Directory for Nurses in Philadelphia, substantially on the plan of the Boston organization. A committee, consisting of Drs. W. W. Keen, Albert H. Smith, and S. Weir Mitchell, was appointed to organize the Directory as speedily as possible, and to take the necessary steps to fit up rooms on the first floor of the College building as an office and residence for the Secretary of the Directory. So soon as the Directory shall be established, we trust that it will receive the heartiest support of the profession throughout the city and the neighboring towns.

In an editorial on the subject of nerve-stretching in our issue of February 18, we spoke of the success had by Billroth and Nussbaum in bloodless nerve-stretching. We learn from a letter to the *Lancet* of February 11, that Prof. Trombetta, of Messina, first used this method in June, 1880, and, in July, 1880, published an account of it in a monograph.

REVIEWS.

Diseases of the Rectum. By William Allingham. *Fourth Edition.* 8vo, pp. 332. Philadelphia: Presley Blakiston, 1882.

This treatise on fistula, hæmorrhoids, ulcer, stricture, prolapsus, and other diseases of the rectum, has been long and favorably known; the chief interest in the present edition lies in the certainty which it affords that more enlarged and extensive experience has not materially modified the views of the author as to the main points involved in the diagnosis and treatment of the various diseases of which he writes.

Probably the point of most general interest, as being still under discussion, is the treatment of internal hæmorrhoids and the comparison of the various methods as to safety and efficiency.

After a careful consideration of these operations, including excision, the use of the écraseur, the application of caustics, the injection of carbolic acid, the galvanocautery, the clamp and scissors with the actual cautery, dilatation of the sphincters, removal by the screw-crusher, and ligation, he gives his unqualified approval to the latter method, which he has employed 1600 times without one fatal result. He quotes from many eminent authorities in support of this position, and adds that he does not think that "in the whole range of surgery there is any procedure worthy of the name 'operation' which can show a greater amount of success or smaller death-rate than the ligature of internal hæmorrhoids." He speaks with almost equal force of the value of linear cauterization in procidentia recti, a method devised by Dr. Van Buren, but which the author has employed in a large number of cases. He very properly rejects the theory of M. Gosselin, supported by Dr. Erskine Mason, that rectal stricture is generally a result of chancroidal ulceration, and is disposed to attribute it in about half the cases to organization and contraction of a late syphilitic deposit, in the others to various local and constitutional conditions.

The book is still, perhaps, with the exception of Dr. Van Buren's treatise, the best guide in the diagnosis and treatment of rectal diseases in the language. Its typography and general appearance are, as usual, highly creditable to the publishers.

Contribution à la Therapeutique Chirurgicale des Fistules Vesico-Vaginales (Contribution to the Surgery of Vesico-Vaginal Fistulæ). By Dr. Cazin. Reprint from the *Archives Générales de Médicine*, March and April, 1881.

The author gives four interesting cases. In the first he practised Lallemand's method of producing granulating margins by the thermo-cautery, and then on the twentieth day uniting them by wire sutures. The second and third cases are illustrations of a process which he terms "autoplasty by mobilization of the posterior wall of the vagina," a very ingenious method, applicable to very large fistulæ. First, the margins of the fistulæ are pared; next, the posterior wall of the vagina is dissected from the rectum in a flap which is cut through at its superior as well as, of course, at its inferior margins, while laterally it is left adherent to the recto-vaginal septum. The margins of the fistulæ and those of the flap are then united by sutures, thus closing the aperture. In order to support this displaced flap and to prevent strain on the sutures and contraction, he introduced a condom into the new vaginal path thus made, and distended it with air, replacing it later by a Gariel pessary. The result was completely successful. Satisfactory coitus was also possible, but he warned his patient that pregnancy must not follow. In the last case, æt. twenty-three, the fistulæ was attended with such contraction of the urethra and the vulvar outlet, that he deemed it better to close the vagina entirely, and after making a recto-vaginal fistula, to utilize the rectum as a bladder, fæces, urine, and the menstrual fluid all passing per anum. The urethra had already so contracted that nothing escaped by it, and to close the vagina was a matter of little difficulty. The result was most excellent. So many cases of this use of the rectum have now been reported that there can be no question of the entire propriety of it in suitable cases. In this country, Keen (Toner Lecture, No. V., 1876), Goodell (Lesions in Gynecology), and others have related very striking and successful cases, which should encourage further attempts in the same direction.

Ueber Nasenblutung, Nasentamponnade und deren Beziehungen zu Erkrankungen des Hörorganes.

On Epistaxis, Tamponning the Nose, and their Relations to Diseases of the Ear. By Dr. Arthur Hartman. Reprint from Knapp & Moos' *Zeit. für Ohrenheilk*, vol. x., 1881.

It is to be feared that in most cases of epistaxis an exact diagnosis as to the locality whence the bleeding comes is rarely made. The author teaches both didactically and clinically that careful examination may, and in most cases will, afford us a precise indication as to the source of the hæmorrhage. This occurs fortunately

most frequently from the front part of the nose, and especially from the septum or the floor of the naris, and rarely from the mucous membrane over the turbinated bones. If the exact source of the hæmorrhage can be discovered, he advises a tampon of absorbent cotton applied directly to the bleeding spot with pressure, or if a precise diagnosis cannot be made, that the naris be plugged with the cotton. He is averse to plugging the posterior naris with cotton, and especially if it be saturated with the liquor ferri sesquichloridi, not only on account of the disagreeable procedure necessary, but because of the liability of producing middle-ear disease, of which he gives three illustrative cases.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 2, 1882.

FORDYCE BARKER, M.D., PRESIDENT, IN THE CHAIR.

THE paper of the evening, by FREDERICK A. CASTLE, M.D., was entitled:

Some Practical Suggestions in the Treatment of those Diseases of Women which every Physician may be called upon to Consider.—Dr. CASTLE apologized for formally appearing before the Academy to read a paper embodying points so disconnected, and apparently so trivial; but still, from the standpoint of the general practitioner, he hoped the time thus spent would not be entirely lost. Most physicians in general practice frequently have occasion to prescribe for women between thirty and fifty years of age, who are approaching the menopause. The troubles of which they complain are, for the most part, considered to be digestive. Almost the only account of the nervous phenomena incident to this period is to be found in the writings of Dr. Sidney Ringer, and is so graphic and truthful that he quoted it. Dr. Ringer extols the use of amyl nitrite in the treatment of these cases.

Dr. CASTLE had not used small bleedings or purgatives. He had tried the bromides, and found that large doses were necessary to allay the symptoms. He had tried amyl nitrite, but some four years ago began the use of arsenic, *liquor potassii arsenitis*, and had found it so efficacious that he had used it in every such case that had come under his care since that time. He did not know who originated this treatment.

The next subject considered was that of uterine displacements, which he confessed to some hesitation in calling attention to. No systematic writer, so far as he knew, had spoken of over-distention of the abdomen with flatus as a cause of prolapsus of the uterus; this he considered to be not an infrequent cause, and should be borne in mind in dealing with these cases.

That class of cases in which a retroverted or retroflexed uterus became attached to the anterior wall of the rectum by adhesions, was next referred to. The symptoms of this condition resembled those of stricture of the rectum. He had also noticed, as a symptom, periodic hæmorrhages taking place from the vagina.

The author of the paper demonstrated how, by oiling a hard-rubber pessary, and holding it over the flame of an alcohol lamp, it could be moulded into any desired form. He claimed originality for changing an ordinary hard-rubber Albert Smith retroversion pessary into an anteversion pessary by this means.

Dr. CASTLE next spoke of vaginal douches, and recommended as the most feasible method of irrigating the vagina, to have patients take a sitz-bath, and while so doing, inject with a syringe the water of the bath.

Dr. HANKS thought the points alluded to were of a practical nature. He was particularly interested in the first suggestion made, for he had found some difficulty in relieving the nervous troubles so frequently met with in women past forty years of age and under fifty. He was very happy to hear of a remedy he had never used, and would not fail to give it a trial.

In reference to one of the causes of prolapsus and retroversion of the uterus being a condition of intestinal indigestion, he thought many could bear testimony to the truthfulness of that statement. He had frequently found this causative factor among dispensary patients. When prolapsus existed, he usually found the patient the subject of constipation, indigestion, or dyspepsia. In regard to hæmorrhage being a symptom of retroversion of the uterus with fixation, he would say, that it might be present one, two, or three months, but after the inflammatory symptoms had subsided, it would cease to exist. In the treatment of these cases great care should be given to keeping the bowels regular. Applications of iodine were useful.

With reference to pessaries, Dr. HANKS said, I find the short anteversion pessaries, which simply pass up in front of the uterus, of little use, and in the vast majority of cases these so-called short anteversion pessaries do much harm when left undisturbed for a fortnight. From a long experience in Demilt Dispensary, and a somewhat shorter experience in the Woman's Hospital, and from my own private practice, I am *sure* I can successfully treat all cases of anteversion without pessaries, except when the anteversion is accompanied by prolapsus in the first degree. I am well pleased with the use of Thomas's *hinge-saddle* pessary, and I believe others will find it effectual. This pessary to which I refer is an Albert Smith, with a second piece for the cervix to set in, hinged to its wide extremity. It raises the uterus from the floor of the vagina, at the same time correcting the anteversion.

Dr. PAUL F. MUNDÉ said these minor details of gynecology form an interesting chapter, and to them he had given, for some years, a good deal of attention. The speaker referred to a lawsuit for damages brought by a lady about forty years of age, who had been the subject of a railroad accident. The symptoms of which she complained were those peculiar to the menopause. Being called to testify in the case, he attributed the symptoms as those incident to and dependent upon the menopause. Only three days previous, a case of tinnitus aurium was brought to him for examination of the uterus, in which that organ was supposed to be at fault. Upon examination no such difficulty was found to be present. Hence, he thought, care should be taken not to attribute too many nervous symptoms to the menopause. He thought the author of the paper laid too much stress upon dyspepsia and flatulence as a cause of prolapsus of the uterus. In dealing with adherent retroverted uteri, he had found that they gave rise to bearing-down pains, but he had never observed ulcerations.

Several years ago he modified the Albert Smith pessary as suggested by the author of the paper, and found it served an excellent purpose in cases of cystocele with a considerable degree of prolapsus. He had also found it was not without its dangers, for one of his patients, after wearing it three or four months, returned to him complaining of a good deal of pain, and upon examination it was found that the pessary was deeply imbedded in the vaginal walls. This is the trouble with all pessaries of a similar kind, except they were so soft as to yield to the pressure of the tissues. He had changed the hinge of Thomas's latest anteversion pessary, furnished with an open cup, sinking it into the bulk of the pessary. With this he was exceedingly well pleased. A patient of his had been wearing one of these pessaries for two years, taking it out every night and replacing it in the morning. It supports the fundus well and does

not get displaced. But there were two objections to it, one was it would produce abrasion of the anterior wall of the vagina, the other was that the menstrual discharges get in between the uterus and the cup, and give rise to a foul odor.

As to plugging the central hole of the nozzle of a vaginal syringe with a match, as recommended by the author of the paper, he had suggested that some seven years ago in a paper already published. He did not agree with Dr. Castle that the vagina was not an absorbent organ. It did not absorb as well as the rectum, but he obtained the soporific effect of the bromide of potassium when introduced into the system by vaginal injections. A certain amount of the injection would necessarily come in contact with the cervical mucous membrane, and that was more absorbent than the vaginal mucous membrane. As an evidence of its absorbent qualities, he cited the fact that a few minutes after applications of iodine to it, that drug could be tasted in the mouth.

Dr. THOMAS ADDIS EMMET said, I regret, Mr. President, that I arrived too late to hear the first part of the paper, and will hence confine my remarks to one point—displacements and pessaries. I think a great deal of the difficulty due to the fact that a correct diagnosis is not made to begin with. A great deal of ingenuity is wasted by not appreciating what we wish to do. I regard anteversion of the uterus as not a malposition of the organ. As to diagnosis, one of the commonest errors, I think, is neglecting to examine by the rectum, and to discover inflammation behind the utero-sacral ligaments. A very small amount of inflammation existing there, even though it may not produce extreme anteversion of the uterus, will produce symptoms recognized and attributed to displacement of the uterus. If inflammation exist behind the uterus, and we attempt to apply a pessary, and we cannot recognize this condition through the vagina, we will be disappointed in the use of any pessary. Another important point is to know whether to reduce a displacement or not, if any exist. The first impulse coming into the mind would be, probably, if the uterus be prolapsed, retroverted, or anteverted, to correct its position. To do so is, in my experience, one of the commonest of errors. If we have this inflammation behind the uterus, we have shortening of both broad ligaments, and the uterus must be retroverted or anteverted, and under these circumstances our pessary will do no good; but, on the contrary, a great deal of harm; so it is important to know just when to reduce a displaced uterus. If we can lift the uterus but a trifling distance, we can relieve all the symptoms attributed to anteversion, even though we antevert the uterus still more. This can be done by a pessary with a long enough curve in the posterior culde-sac, so as to lift the neck of the organ from the floor of the pelvis. If due to inflammation behind the uterus, a pessary will increase the difficulty. These cases are exceedingly difficult to treat if we cannot prevent the uterus coming forward. One point necessary is to make it a little wider than the vaginal outlet; or use a small India-rubber disk or plug of cotton—something that will raise the uterus just enough to restore the circulation. It matters very little what pessary is used, as long as you have a clear idea of what you want to do with it. With a very simple instrument the indications can be fulfilled, if it is but a pledget of cotton.

In regard to vaginal injections, I would simply say that if a woman will not take them lying down I would prohibit her using them. The position is of as much importance as the hot water. You must make use of posture to get rid of the engorgement. You might as well treat a case of varicose veins of the leg with that member hanging down. After a patient has remained in position, with her hips higher than the rest of her body, for a short time, use the douche, and you will give tone to the vessels. Much harm comes from the use of the vaginal douche in the upright position. I always direct my patients to pass the nozzle of the syringe to the opposite side from where the cellulitis is.

Dr. WM. T. LUSK said it was his misfortune to have heard only a small portion of the paper which had been read, hence he would base his remarks on the discussion which followed. About ten years ago, Shultz wrote an article in which he said that an anteverted uterus never gave rise to symptoms until the utero-sacral ligaments were involved. He liked the anteversion pessary shown by Dr. Castle. Anteversion pessaries could not be safely worn without removal from time to time. Excessive stretching of the vagina might give rise to local peritonitis.

The PRESIDENT, being called upon for remarks, responded, saying he would venture to discuss a few points brought out in the paper which seemed of great practical value, bearing upon just those questions which every practitioner is called upon to treat sometimes. First, in regard to functional disturbances associated with the menopause. He met with this class of patients almost every day. As to the remedies, the author of the paper had referred to purgatives, laxatives, and small bleedings. Now this form of treatment is very useful. He had not resorted to small bleedings. Purgatives administered once in about four weeks, to take the place of the drain which the system has been accustomed to for thirty or forty years, were very beneficial, especially in cases where there is a tendency to plethora. With some women, who up to this age have been thin, there is a tendency to get stout and fat. At periods corresponding to the time of the menstrual flow, they would have attacks of sleeplessness, palpitation of the heart, waking up at night with a feeling as if the heart's action would stop, which was owing to accumulations within the system not relieved by periodic flow. At these times a saline laxative administered for a few days acts well. But there was a class of cases in which such treatment would be worse than no treatment. These were patients with cold extremities and flushed face, due not to congestion but to exhaustion—vaso-motor disturbances. It is in this class of cases that the bromide of potassium, combined with tonics, is excellent. As to arsenic in these cases, he believed many present must have heard him recommend it as long ago as fifteen or twenty years. In some of these cases, we are apt to have small hæmorrhages from the vagina, amounting to very little in the aggregate, but continuing for days or weeks. For these he considered Fowler's solution of arsenic almost a specific. He thought it was a mistake made by most practitioners to regard the uterus as having a fixed locality. The position of the uterus is constantly changing, according to the condition of the bladder, intestine, and rectum. When we attempt to treat this condition, and establish a fixed theoretical point by means of instruments, he thought we were very apt to overlook this change in position, which was normal and physiological. For many years, when he had found a case of retroversion or prolapsus of the uterus, he had inquired into the condition of the digestive organs. By attention to the digestion, the removal of flatus, and correcting the condition of the bladder, many of these cases were relieved. In regard to pessaries, he would say he had never introduced one but twice; these were in old ladies suffering from cystocele.

Dr. CASTLE closed the discussion, and the Academy adjourned.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, March 2, 1882.

RICHARD A. CLEEMANN, M.D., IN THE CHAIR.

Mechanical Dilators in Gynecological Practice.—Dr. CHAS. H. THOMAS stated that he had used the Ellinger dilator, and had been very much annoyed by a bad fault in the form of the blades. As soon as the instrument is opened, the uterus shows a strong tendency to slip away from the dilator. This is due to the form of the outside edge of the blades, which gives to the dilator a wedge shape, with a difference of ten millimetres between the measurements of the base and apex. Conicity in uterine dilators is a dangerous quality; the instrument tending to slip in the direction of the base of the wedge. If the dilator, when in use, slips out of the grasp of the cervix, it is likely to produce laceration; while if it slip inward, as most dilators tend to do, it will wound the fundus uteri.

Dr. B. F. BAER made the following remarks: I am glad that Dr. Thomas has alluded to some of the defects of Ellinger's dilator. I have found the same objections, and have tried to overcome them by having an instrument so made that the mechanism by which the blades are separated is placed in the blades themselves, close to their points, and entirely concealed when they are in contact. This gives great power to a *small* instrument, and as the outer surface of the blades is perfectly parallel, and cannot feather, because of the position of the separating mechanism, the instrument does not slip out. I do not now need a tenaculum to hold the cervix in place, which is a great advantage. I have also had the handles bent down, so that I can see just what the instrument is doing; and, by a screw, so placed that it can be worked on the left, with the left hand, whilst the right hand holds the handles and separates the blades, the dilatation can be done slowly and deliberately, with less tendency to slip out, and with less pain than with the old instrument.

With regard to the result of dilatation of the cervix for the cure of sterility, my experience is based upon the treatment, by dilatation with the steel instrument, of more than two hundred women who were sterile because of a defect in the calibre of the cervical canal, either from stenosis or flexion, resulting from imperfect development. Where the sterility was the result of obstruction, dysmenorrhœa was almost invariably present. This experience leads me to the conclusion that, although the canal is made so patulous by dilatation as to markedly improve the dysmenorrhœa, and in many cases to cure it permanently, the sterility remains in the vast majority of cases, if the patient has been married more than three years before coming under treatment; and if she had attained the age of twenty-six or twenty-seven years before marriage, then, though she come under treatment immediately afterwards, she will very likely be sterile. This will apply to the great majority of cases, but not to all. I think the reason may be stated as follows: The long-continued hyperæmia of the uterus, the result of dysmenorrhœa, which probably existed from puberty, and especially from the non-fulfilment of the sexual function by conception, gives rise to such changes in the histological elements of the uterus that, instead of the organ being muscular, and, therefore, possessing its natural resiliency, elasticity, and suction power, it is hard, fibrous, and non-elastic. The mucous membrane lining the cavity also becomes so changed in its character that, if fecundation should take place, there is not a proper nidus furnished for the reception of the ovum, and it passes off without forming an attachment. The tissues of the Fallopian tubes are likewise changed, and the tubes narrowed in consequence. This might explain the persistence of the sterility after the dysmenorrhœa has been relieved by dilatation of the cervix.

Dr. J. C. DACOSTA has modified the Ellinger dilator by having the blades made very stiff and with a knob at the extremity, as in the uterine sound. When necessary he makes use of counter-pressure over the fundus. In some cases he uses a small instrument first, to enable him to introduce the more powerful one through the internal os.

Respecting the statement of Dr. Baer as to the incurability of sterility of three years' standing. He had recently had under treatment a lady, who had one child seven years ago, but had since been sterile; the uterus was sharply anteflexed; a dilator was used for the relief of the flexion, and three months later the patient exhibited all the early signs of pregnancy.

Dr. BAER remarked that this case was not one of the class to which he had alluded. This patient had had a child, and anteflexion, probably the result of sub-involution and endometritis, was the cause of the sterility. Failure occurs in cases which have never been pregnant, and in which the uterus is enlarged, hard, and changed in its histological character. He thinks it desirable to avoid multiplicity of instruments, and to have one dilator small enough to enter any os, and so arranged as not to yield to any pressure, but under all circumstances to preserve the parallelism of its blades.

Dr. THOMAS thought that one reason why the sponge-tent did good work, was because it worked slowly and continuously. Four years ago he made drawings of a modification of the steel dilator to accomplish the same end. The instrument was made somewhat shorter than the ordinary one; the blades were absolutely parallel on the outside edges and were approximated by means of a screw passing through a slot in one handle, and attached to the other, a milled-head traversed this screw and between it and the handle of the dilator was placed a spiral spring or a soft-rubber pad. This instrument was intended to remain *in situ* for twenty-four hours, the spring making the action gradual and continuous, one or two turns of the screw being given every two hours by the doctor, or a nurse properly instructed. The doctor thought that in this manner he could secure many of the advantages of the sponge-tent, and at the same time avoid its dangers.

Dr. R. P. HARRIS had recently seen in a foreign journal, diagrams of a very neat instrument intended to accomplish the same purpose. It consisted of a C-shaped spring, to the ends of which were attached blades long enough to pass through the internal os. The fingers pressing on the top and bottom of the C, closed the instrument for insertion. Its action would be regulated by the strength of the spring. To obviate the danger of slipping too far into the uterus, a dilator with diverging blades could be furnished with shoulders to rest against the cervix. The divergence of the points of the blades he considers an advantage. The feathering reduces the apparent divergence in use, and that which remains helps to retain the instrument in place, particularly if the blades are furnished with shoulders; the dilating power is greatest where it is most needed, at the internal os. To meet an objection advanced by Dr. Thomas, he suggested that the shoulders might be made movable to suit uteri of different depths. In every case in which a dilator is used, the patient should be kept in bed until the direct effects are over. He had recently under observation a case of dysmenorrhœa, in which the dilator failed, but in which a sponge-tent effected a cure.

Dr. BAER thought the blades should be parallel, and that dilatation should be uniform, without regard to the point of greatest constriction. Too much should not be expected from the dilator; a case of dysmenorrhœa could not be cured by one treatment; it is by the re-

peated use of the dilator at proper intervals that the best results are to be secured. As an instrument, it replaces a set of graduated sounds, and the original inventor must have had that object in view. The contractility of the uterus must be overcome gradually. Even when tents are used, contraction will recur. The advantage of the dilator lies in its comparative freedom from danger, and in being less troublesome to the physician. It is indicated whenever there is constriction from any cause; for if there is not good drainage for uterine discharges, there will surely be irritation, resulting in endometritis.

The effect of the dilator on hypertrophy is the same as with sterility. If of long standing, it is not curable; after the hard fibrous stage is reached, no reduction results from its use. But if the condition is recent, and the enlargement is of the muscular elements, or is due to engorgement, a cure may be secured, because here we have nearly the same condition which exists after labor, viz., a muscular uterus having the power to contract and involute. I do not believe that chronic hypertrophy of long standing will, as a rule, yield to any treatment, but the symptoms to which it gives rise can be relieved to a very great degree in most cases.

Dr. ALBERT H. SMITH regretted that Dr. Baer had not seen the admirable effects of the sponge-tent on uterine hyperplasia. If you use a steel dilator in the uterus, it can remain but a very short time, practically not more than five minutes, giving a sudden mechanical dilatation, accompanied by probable rupture of the hardened fibres of the cervical canal; but it cannot give that stimulation to the contractility of the uterine muscles and to cell action that results from the use of the sponge-tent when no inflammatory action is existing. There is great resistance at first, but after the lapse of forty-eight hours, the internal os and uterine walls have relaxed, spasmodic contraction ceases, and the vital power and muscular contractility of the uterus are developed by the presence of a foreign body which the natural powers will try to expel. Just as you have, after the expulsion of an ovum, a physical atrophy of the uterus, so you will have a similar action set up by the presence of a sponge-tent in the cavity of the uterus. No such result could be secured by the use of a steel dilator; the latter must lacerate and leave surfaces ready to absorb septic matter, while you have not the advantage of the presence of the salicylic acid or other disinfectant present in the tent; the latter, expanding slowly, is not likely to cause laceration. The too early removal of the tent, while the spongioles are fast in the uterine tissue, may leave an abraded surface; but after forty-eight hours the tissues have shrunk away, and the sponge comes away easily. Dr. Smith read the following letter from Dr. Mundé:

"My Dear Doctor: . . . Remembering your remark with regard to the absence of proper dilatation of tupelo-tents, I procured a number from Tiemann & Co., and dilated them in tepid water. I send you by this same post four different sizes, dilated and undilated, and also two perforated, zinc-lined tents, to be worn during the period, for dysmenorrhœa—one before, the other after, dilatation.

"This amount of dilatation was reached within one hour. Certainly no fault can be found with the expansion of these tents, since it will be seen on comparison that all the tents have swelled to fully double their compressed size, and have retained their expansion on being dried. It may be objected that this full dilatation would probably not take place if a resistance were offered as in the uterine canal. While I partly admit this, still I have within a month had reason to use the largest size to dilate a uterus, and secured quite as much expansion, as shown by the accompanying tent. The softness of the wood allows of their being whittled to any size and shape.

"I also send a tent dilated in utero, which shows some contraction at the site of the internal os.

"I presume that the failure of your tents to dilate may have been due to their having absorbed moisture from the atmosphere. They should always be kept wrapped in air- and water-tight paper. Tiemann & Co. tell me that all their tents are compressed to their utmost by machinery.

"As for the other forms of dilatation, I have used the steel, two-branched dilator of Ellinger almost exclusively. I found it too difficult to force the graduated hard-rubber sounds through the cervix if it is virginal and hard. The tenaculum tears out, and the force is too great. I have dilated in hospital and private practice (with two-branched dilators) in about one hundred and fifty different cases, probably some six to seven hundred times, chiefly for dysmenorrhœa and sterility, always in my office or dispensary. I have almost invariably relieved the dysmenorrhœa, temporarily, at least; the sterility but rarely, although my later statistics on this point are meagre. I have but one bad result, pelvic peritonitis, and then curetting and tincture of iodine to the endometrium were also employed, either of which might be blamed. I prefer steel divergent dilators for temporary, tupelo-tents for permanent, results. Slippery-elm-tents dilate but little, but I have found them good in dysmenorrhœa to render the canal patent."

Dr. R. P. HARRIS stated that he is using cylindrical sponge-tents, coated with salicylic acid, which he finds has a local anæsthetic effect on the lining membrane of the uterus.

Dr. A. H. SMITH said that of all the steel dilators which he has tried, he prefers the instrument devised by Dr. T. G. Thomas, in which the blades are separated by being drawn into a cannula by screw action. It is, however, difficult to clean. He has found the handles of Dr. Elwood Wilson's dilators very much in the way when the uterus is anteflexed.

Dr. BAER remarked that he was much instructed by Dr. Smith's remarks. He was surprised at the time—forty-eight hours—that a sponge-tent could be allowed to remain, and at its effect in the disintegration of abnormal tissue without the development of septicæmia. He finds it hard to believe a change could ensue after the uterine walls had been changed to hard fibrous tissue; but experience is the best teacher.

CORRESPONDENCE.

A NEW DANGER IN ANÆSTHESIA.

To the Editor of THE MEDICAL NEWS:

A case similar to the one related by Dr. George Fischer, in the *Deutsche Zeitschrift für Chirurgie*, 1881, vol. xv., p. 188, copied in THE MEDICAL NEWS of February 25, 1882, except, however, its fatal results, came under my observation during the late civil war, and is amongst my most vivid recollections.

Just after the battle of the North Nuna, in May, 1864, an officer was brought into the field-hospital with his arm shattered, and necessitating immediate amputation. Chloroform was administered in the usual way, and every preparation was made for the operation, when suddenly, at the period of complete anæsthesia, respiration ceased, the pulse had nearly gone at the wrist, and there was every indication of immediate death. His tongue was drawn out; exploration was made of the mouth and fauces, and a large quid of tobacco, seemingly as large as a large-size hen's egg, was discovered filling up the entire faucial space, and falling over on the larynx and glottis, and impeding res-

piration. It was removed with difficulty, the patient was resuscitated, chloroform was readministered, and the operation went on to completion successfully.

It would seem almost incredible that so large a piece of tobacco could have remained in his mouth unobserved, but the operation was performed after twilight, in the confusion of a recent engagement, and it had to be done by candle-light—hence the oversight.

S. J. RADCLIFFE, M.D.

WASHINGTON, D. C., March 3, 1882.

NEWS ITEMS.

BROOKLYN.

(From our Special Correspondent.)

THE METHODIST EPISCOPAL HOSPITAL, founded by Mr. George I. Seney, is to be constructed at once. It will occupy a full block of ground in the immediate neighborhood of Prospect Park. The completed structure will consist of ten distinct buildings, fronting towards the north—an arrangement adopted in order to permit of a southern exposure for the pavilion wards; in the centre a four-story administration building, in which also are situated several private wards and rooms, the nurses' dormitories, the chapel, and library; in the rear of this is the accessory administration building, containing the kitchen, laundry, etc.; flanking these are two-story pavilions, one on either side, with their service buildings; upon one side of these are to be placed the operating theatre, in the basement of which will be placed the dispensary, facing the north, and a mortuary building facing the south; beyond these is to be placed a one-story pavilion with its service building; beyond the other two-story pavilion is to be placed in front a children's and orthopedic ward facing the north, and a pavilion for contagious diseases facing the south; upon the farther extremity is the ambulance stable. The ventilation is to be accomplished by a combination of the fan and hot-air systems, a central chimney to communicate with a ventilating flue under each bed; there will also be arrangements for ridge ventilation. The buildings are to be heated by hot-air passed over steam-coils and by open fire-places. The hospital when completed will cost about $500,000, and will accommodate between 150 and 200 patients, allowing 1800 cubic feet of air to each patient. It will be built of brick with brownstone trimmings. The whole arrangement of the institution has been under the personal supervision of Dr. L. S. Pilcher, of Brooklyn, and Dr. A. E. M. Purdy, of New York, and is intended to embody all the more advanced views in the matter of hospital construction.

THE BROOKLYN EYE AND EAR HOSPITAL has also recently purchased a new building, which, with the land, cost them $50,000, one-half of which has been subscribed by Mr. Seney. It will be fitted up and ready for occupation during the present spring.

THE LONG ISLAND COLLEGE HOSPITAL has also been undergoing very extensive modifications—so much so that the original buildings can hardly be recognized. The hospital accommodations are very much increased and the facilities for instruction have been practically doubled.

BALTIMORE.

(From our Special Correspondent.)

WOMAN'S MEDICAL COLLEGE AND TRAINING SCHOOL FOR NURSES.—A Woman's Medical College has recently been incorporated in Baltimore. Associated with the College is to be a women's and children's dispensary and a training school for nurses. The following is a list of the faculty as far as completed: B. Bernard Browne, M.D., Professor of Diseases of Women and Children and Clinical Obstetrics; Thomas A. Ashby, M.D., Professor of Obstetrics and Clinical Gynecology; Randolph Winslow, M.D., Professor of Surgery; Eugene F. Cordell, M.D., Professor of Materia Medica and Therapeutics; Wm. D. Booker, M.D., Professor of Physiology; Robert B. Morison, M.D., Professor of Chemistry, Urinary Analysis, and Toxicology; Herbert Harlan, M.D., Professor of Anatomy and Clinical Surgery. The Chair of Practice will shortly be filled. The first course of lectures will begin October 1, 1882.

VIENNA.

(From our Special Correspondent.)

NOTES ON GYNECOLOGY.—Dr. M. Funk, Privat Docent, University of Vienna, Das Allgemein Krankenhaus, condemned severely a number of gynecological procedures common in England, but more especially practised in the United States.

Pessaries.—The universal and generally indiscriminate use of pessaries for all varieties and conditions of uterine versions and flexions, he censures as bad practice. Upon the employment of pessaries in this class of uterine disorders, he says:

1. In the great majority of cases, the abnormality, if it really be abnormality, cannot be corrected by the support of a pessary of any kind.

2. If the pessary be at all effective, it must cause so much pain, that it cannot be worn with any degree of comfort.

3. When correcting the position of the uterus, a pessary acts as a ligature around the cervix, impedes circulation and nutritive processes generally.

4. In a number of cases, he has observed the site of a pessary to be the starting-point of a carcinoma, though he is not at all a believer in the traumatic origin of that disease.

The Sound.—He objects to the use of the sound, so generally, as a means of diagnosis, as, also, to the too frequent introduction of the speculum. He claims that abdominal palpation, with digital examination sufficiently varied, is amply sufficient for the diagnosis of most uterine and vaginal disorders. The introduction of the sound he regards as invariably injurious, and in private practice rarely uses the instrument.

While upon the subject of speculums, Dr. Funk alluded indignantly to the assumption of Dr. J. Marion Sims, of New York, to the invention of the "duck-bill speculum." Metzler, of Prague, in 1846, used the same instrument which Dr. Sims claimed as original in 1850.

UTERINE AND VAGINAL CARCINOMA.—Dr. Funk has studied for many years, and under the most favorable auspices, the etiology of all forms of vaginal and uterine carcinoma. He sums up the results of over twenty years' observation, as follows:

1. Syphilis has no causative relation to cancer n these localities whatever, though I have seldom seen the coexistence of the two diseases.

2. Heredity in uterine cancer car . be shown by the most critical analysis of the cases, which I have seen. This point is one of much practical importance, as I have very frequently been consulted when the subject of matrimony has been discussed. In every case, I believe, I have relieved myself of grave moral responsibility by saying positively, there is absolutely no evidence of hereditary transmission of the disease. This, of course, I believe does not obtain in cancer occurring in other localities.

3. Parturition has been emphasized by Graily Hewitt as a cause of uterine cancer, but I must think entirely without foundation in truth. I have had extraordinary facilities for observation in regard to this point, in the

lying-in wards of Profs. Carl, and Gustav Braun, and Spaeth, and so speak with positiveness.

4. Traumatism is never the origin of cancer. I have seen, it is true, a carcinoma spring from the place where a pessary occasioned pressure. In that case, however, I am convinced the relation was only a coincidence.

5. Acute and chronic inflammation connected with the female sexual organs, of all forms and conditions, occur so frequently in the Viennese prostitutes, of whom you very well know we have great numbers, without eventuating in any more serious disease, that I am convinced they are never the starting-point of cancer.

At present, I am not in a position to offer any theory as to the etiology of carcinoma in connection with the female sexual organs. All I can do is to criticise the asserted causes and await developments.

MILAN.

(*From our Special Correspondent.*)

THE SANTA CATERINA LYING-IN HOSPITAL.—During 1881, in this hospital, there have been 290 deliveries, of which 220 were natural and 70 preternatural. The latter required the performance of 77 operations, as follows, viz.: Reposition of the funis by mechanical appliances, 1; forceps in failure of expulsive power, in the cavity of the pelvis, or at the inferior strait, 22; forceps at or above the brim in cases of pelvic deformity, 6; extractions in pelvic presentations, 6; turning, 12; induction of premature labor, 11; induction of abortion in cases of pelvic deformity, 1; craniotomy, 7 (all saved but 1); evisceration in transverse presentations with impaction, 3 (all saved); craniotomy and evisceration of the trunk, 1 (saved); Porro-Cæsarean sections, 2 (both saved); incisions of the os uteri for rigidity, 2; artificial delivery, 3.

Amongst the 290 cases, there have been 4 cases of eclampsia and 7 of placenta prævia. Nine of the whole died, from the following causes, viz.: Nephritis, 3; heart disease, 1; as the result of a podalic version made by a physician at home, 1; pleuritis, 1; and septic infection, 3.

THE OSPEDALE MAGGIORE.—Here the first successful ovariotomy was performed on October 2, 1881.

PROCEEDINGS OF THE IOWA STATE MEDICAL SOCIETY.—The Thirtieth Annual Session of the Iowa State Medical Society was held in Des Moines, January 25–27, 1882. The Society was called to order by the President, Dr. T. J. Caldwell, on Wednesday, January 25, at 10 A.M., and was opened with prayer by Bishop J. F. Hurst, D.D., after which the President delivered his annual address.

During the session almost fifty members were added to the roll. The total attendance was about two hundred.

The following papers were read, discussed, and referred to the Committee on Publication: "Inversion of the Uterus," by Dr. J. A. Blanchard, of Des Moines; "The Plea of Insanity," by Dr. A. Reynolds, of Clinton; "A Small-pox Hospital," by Dr. R. J. Farquharson, of Des Moines; "Disappointments of Country Physicians in the Practice of Gynecology," by Dr. J. Williamson, of Ottumwa; "Pyelitis occurring during the Puerperal State," by Dr. L. C. Swift, of Des Moines; "Management of the Newly-born Infant," by Dr. G. W. Beggs, of Sioux City; "The Diseases Incident to Military Prisons and the Influences by which they are Modified," by Dr. Wm. Watson, of Dubuque; "Operative Procedures in Corneal Lesions," by Dr. C. M. Hobby, of Iowa City; "Local Treatment of the Mucous Membrane of the Air Passages," by Dr. E. H. Hazen, of Davenport; "Life—What is It?" by Dr. J. B. Gorrell, of Newton, "Microscopy," by Dr. J. J. M. Angear, of Fort Madison.

The following officers were elected for the ensuing year: President, Dr. D. Scofield, Washington; Vice-Presidents, S. E. Robinson, West Union; H. L. Getz, Marshall; Secretary, J. F. Kennedy, Des Moines; Assistant Secretary, D. McCrea, Council Bluffs; Treasurer, G. R. Skinner, Cedar Rapids.

The following changes were made in the Constitution: Annual meetings shall be held hereafter on the third Wednesday of May in each year, except when the sessions of the American Medical Association include this date. Then the President shall name the day, which shall be within two weeks of the third Wednesday in May.

The annual dues to be paid by permanent members were reduced to one dollar.

The Society adjourned to meet at Council Bluffs in May, 1883.

THE PUBLIC HEALTH.—For the week ending *February 25*, we report the following additional items: Small-pox caused 7 deaths in St. Louis; 3 each, in New Orleans and Hudson Co., N. J.; 2 each, in Omaha, Nebraska, and the District of Columbia; and 1 each, in Detroit and Buffalo. Hudson Co., N. J., reported 3 deaths from cerebro-spinal meningitis; Davenport 2; and St. Louis, Detroit, Buffalo, and Salt Lake City, each 1 death from this cause. There were 9 deaths from diphtheria in Brooklyn, against 23 for the preceding week; 4 in Buffalo and the District of Columbia; 3 each, in Detroit and St. Louis; and 2 each, in Hudson Co., N. J., and San Francisco. It is to be noted that not a death from this disease occurred in New Orleans during the week. There was a slight diminution in the number of deaths from scarlet fever in Brooklyn, where this disease has of late been unusually prevalent. The record of deaths from this cause for the week is as follows: Brooklyn, 27; Buffalo, 9; Hudson Co., N. J., 6; San Francisco, 4; New Orleans, St. Louis, and the District of Columbia, each 3; and Detroit, Davenport, and Omaha, Nebraska, each 1 death. Malarial fever is prevalent in St. Louis, 7 fatal cases being reported in the week. A marked accretion in the number of deaths (10), from puerperal diseases is noticed in Hudson Co., N. J. Of the whole number of deaths (14), in Salt Lake City, 4 were caused by pneumonia, which is 28.57 per cent. of the total mortality; consumption caused only 1 death.

For the week ending *March 4*, the deaths caused by some of the principal diseases were as follows: Of the eighteen prominent cities throughout the country from which reports have been received, death from small-pox occurred in eight. Cincinnati heads the list with 27 deaths from this cause; then in order follow Pittsburgh, 19; Philadelphia, 14; New York, 14; St. Louis, 8; Memphis, 2; Wilmington, Del., Milwaukee, and Dayton, O., each 1 death. Cincinnati, Milwaukee, and St. Louis, each report 2 deaths from cerebro-spinal meningitis, and Indianapolis 1 death from this cause. There has been a falling off in the deaths from diphtheria in Boston, 9 deaths being reported this week, as compared with 14 for the preceding one. There were 13 deaths from this cause in Philadelphia, an increase of 1 over the preceding week; 4 in New Haven; 3 in Indianapolis; 2 in Milwaukee, and 1 each in Providence, Pittsburg, Cincinnati, St. Louis, Charleston, and Savannah. Only five out of sixteen prominent places report deaths from scarlet fever, and in none of them is the disease prevalent: they are Philadelphia, which reports 4 deaths, and Boston, Charleston, Pittsburg, and St. Louis, 1 death each. No reports have been received from New York or Brooklyn. Typhoid fever

caused 8 deaths in Philadelphia; 3 in Pittsburg; 3 in Cincinnati; 2 each in Boston, Indianapolis, and Wilmington; and 1 each in Louisville, Charleston, Savannah, and New Haven. Malarial fever is still prevalent in Memphis, Tenn., and in St. Louis, 3 deaths having occurred in the former city and 4 in the latter, during the week. Providence, R. I., and Wilmington, Del., both report a number of deaths from whooping-cough. Acute pulmonary affections are prevalent in Boston, Philadelphia, and St. Louis. Of the total number of deaths for the week, consumption caused 19.93 per cent. in Boston; 18.76 per cent. in Philadelphia; 24.44 per cent. in Louisville, Ky.; 16.58 per cent. in Cincinnati; 26.66 per cent. in Nashville, Tenn.; 5 per cent. in Memphis, Tenn.; and 3.84 per cent in Wilmington, Del.

HEALTH IN MICHIGAN.—The Bulletin of the State Board of Health reports that, for the week ending February 25, 1882, neuralgia, intermittent fever, bronchitis, consumption, and rheumatism have considerably increased, and that pneumonia has considerably decreased in area of prevalence.

Including reports by regular observers and by others, diphtheria was reported present during the week ending February 25, and since, at 31 places, scarlet fever at 19 places, measles at 9 places, and small-pox at 8 places, in all as follows: at Spalding, Menominee Co. (9 cases), February 21; among the Indians near Spalding (8 cases), February 21, and 22 deaths to that date; at Detroit and Grand Rapids (convalescent), February 25; at Parkville, St. Joseph Co., February 28; in Kimball and Port Huron townships, St. Clair Co., February 28; at Stanton, Montcalm Co., February 28, 1882.

THE MEDICAL DEPARTMENT OF WOOSTER UNIVERSITY, Wooster, O., has been reorganized by the appointment of the following faculty:

Leander Firestone, M.D., LL.D., Dean, Professor of the Medical and Surgical Diseases of Women; Akin C. Miller, M.D., Registrar and Treasurer, Professor of Obstetrics and Clinical Gynecology; Frank J. Weed, M.D., Professor of Principles of Surgery and Didactic Surgery; X. C. Scott, A.M., M.D., Professor of Ophthalmology and Otology; J. E. Burns, M.D., Professor of Diseases of Children; Reuben A. Vance, A.M., M.D., Professor of Operative and Clinical Surgery; [1]Professor of Principles and Practice of Medicine; Theodore A. Weed, M.D., L.R.C.P., London, Secretary and Professor of Thoracic Diseases and Physical Diagnosis; Jamin Strong, Jr., M.D., Professor of Nervous and Mental Diseases; George Mitchell, M.D., Professor of Materia Medica and Therapeutics; [1]Professor of Anatomy; H. C. Foote, A.M., Professor of Chemistry and Toxicology; L. B. Tuckerman, A.M., M.D., Lecturer on Physiology; Demonstrators of Anatomy, Robert D. Alton, M.D., William C. Craven, M.D.

GENEROUS GIFT TO THE COLLEGE OF PHYSICIANS, OF PHILADELPHIA.—Dr. Weir Mitchell has recently presented another thousand dollars to the College, the income of which is to be used for library purposes. By direction of the College this sum has been added to the "Weir Mitchell Library Fund."

COLLEGE OF PHYSICIANS AND SURGEONS, OF CHICAGO.—We understand that Drs. J. J. M. Angear and A. M. Carpenter have resigned their professorships in the College of Physicians and Surgeons, of Keokuk, and have accepted, respectively, the chairs of the Principles of Medicine, and of the Practice of Medicine, in the Chicago College, which has just been organized.

[1] The vacancies appearing in the above list will be filled before the beginning of the session.

GRADUATES IN MEDICINE.—At the annual commencement of the College of Physicians and Surgeons, of Keokuk, Iowa, held February 21, the degree of M. D. was conferred on 122 graduates—the largest class the school has ever had.

At the Annual Commencement of the Medical Department of the University of Louisville, held February 28, the degree was conferred on 96 graduates.

At the annual commencement of the Medical College of South Carolina, held at Charleston on March 1, the degree was given to 19 candidates; and

At the Commencement of the University of Georgia, at Augusta, on February 28, the degree was conferred upon 23 candidates.

ANALYSIS OF ELEPHANT'S MILK.—The birth of Barnum's baby elephant has afforded an opportunity of obtaining the milk of that animal, and Prof. Doremus has made an examination of it. "When first I examined the specimens, they seemed watery," he said, a few days ago, to the reporter of the New York *Tribune*, who interviewed him, "but after allowing the milk to stand, I could not help wondering at the large percentage of cream. The following represents the daily diet of the mother: 3 pecks of oats, 1 bucket of bran mash, 5 or 6 loaves of bread, ½ bushel of roots (potatoes, etc.), 50 to 75 pounds of hay, and 40 gallons of water. The last specimen of milk I obtained exceeded the others in quantity, and would, therefore, be the fairest for a test. It took several milkings to get even these, for the calf would begin to nurse, then stop, and when she stopped, the flow of milk did, also. The analyses of the samples gave the following results:

	First.	Second.	Third.
Quantity	19. C. C.	36. C. C.	72. C. C.
Cream	52.4 vol. p. ct.	58.	62.
Reaction	Neutral.	Slightly Alkaline.	Slightly Acid.
Sp. Gr.			1,023.7

In 100 Parts Weight.

Water	67.567	69.286	66 697
Solids	32.433	30.714	33.303
Fat	17.546	19.095	22.070
Solids not fat	14.887	11.619	11.233
Caseine	14.236	3 694	3 212
Sugar		7.267	7.392
Ash	0.658	0.658	0.629

"It is evident, from these analyses, that the milk approaches the composition of cream. The milk was pleasant in flavor and odor, and very superior in these respects to that of many animals. The fat is a light yellow, resembling olive oil; is very pleasant in odor and taste, is liquid at common temperatures, but solidifies at 10° Centigrade, or 64° Fahrenheit. From whatever standpoint, therefore, we view the lacteal products of these four-footed giants, we are fully warranted in ascribing to it not only extreme richness, but also great delicacy of flavor."

We are glad to learn that Prof. Doremus, while on the visit, during which he made the above analysis, fortunately escaped serious injury from a most unexpected and violent assault by the father of the baby elephant. The elephant seized him around the waist with his trunk, and swung him violently against the side of the room. He owes his escape to the ready aid of the keeper, and suffered only a slight wound in the head. Elephants evidently do not respect professors as they ought to.

"GROUND-AIR."—Few persons realize the important influence on health of "ground-air," that is, the air contained in the soil. Yet, in an address before the Association of German Naturalists and Physicians, last

September, and published in the January number of the *Popular Science Monthly*, Dr. Max Von Pettenkofer states that so great is the porosity of the ground on which we dwell, that "heavy, towering buildings often stand on a soil which is filled to the extent of a third of its volume with air." This air contains not only far more carbonic acid than the air of the atmosphere, but also many deleterious emanations from the soil, which enter our houses, not in small quantities, but, as it were, by wholesale. "While the house is heated in the cold season, and at night in the summer, while the air within-doors is warmer than the surrounding out-door air, the houses act as draught-flues, and suck air out from the ground as if they were cupping-glasses set over it."

The Rights of Medical Experts.—The *Boston Medical and Surgical Journal* reports a decision of interest to physicians, which has been recently given in the Superior Court at Boston. A lady received a severe injury resulting from a defect of a street in Lynn, Mass., and after a long contest, involving four trials, succeeded in recovering heavy damages. At three of these trials her attending surgeon was called as a witness, and was examined not only as to knowledge of the facts in the case, but also as an expert on the anatomy of the part injured, the probable results of the injury, and the prospects of the patient's recovery, and was also consulted on these matters by the plaintiff's counsel before the trial, a promissory note being given for his professional opinion. Payment of this note was afterwards refused, on the ground that there was no legal consideration for their promise to pay, holding that a medical man is bound to testify to anything he may happen to know relevant to a case in court, whether it is a matter of fact in the particular case, or of general professional knowledge or opinion. The court, however, disallowed this defence, and ruled that a physician is not bound to give his professional opinion for nothing in court any more than elsewhere, and the jury found a verdict for the full extent of the claim. Although this decision was not given in the highest State court, it affords a precedent which will probably be followed, although in other States there is a conflict of authority on this point.

Surgical Triumphs.—Prof. Nussbaum has just published a very interesting address delivered on the anniversary of the hundredth birthday of Philipp Franz von Walther, who was born in 1782 and died in 1849. After an interesting account of his life and work, Nussbaum makes a rapid survey of progress since Walther's day. Anæsthetics, antiseptics, and bloodless operations, are all advanced as surgical triumphs. Of ovariotomy he says, "About 40,000 years of life have already been gained for women by successful ovariotomies;" and he believes that lives will be saved and much suffering prevented by Hegar's operation of removing the ovaries to anticipate the climacteric age in women, the subjects of bleeding uterine fibroids. The cure of reflex epilepsy by nerve-stretching he regards as a great advance in therapeutics. Excision of a kidney, or of the spleen, of parts of a cancerous bladder or prostate, of the rectum, and of the pylorus, he also regards with confident hope of improving results; and he believes it "not quite impossible that diseased portions of lung may be successfully excised." Our German colleagues are certainly not behind us in courage and adventure. —*British Med. Journ.*, Jan. 14, 1882.

A Teratological Curiosity.—According to the *Presse Médicale Belge*, two united children have been recently exhibited in Vienna which surpass in interest the celebrated Siamese twins. They were born in 1877, at Lacona, in the province of Turin. They have each a well-formed head, and perfect arms, and a separate thorax with perfect internal viscera. At the sixth rib, however, they unite, and there is but one abdomen, one anus, one right, and one left leg. There is a penis and corresponding scrotum, but behind the latter there is a rudimentary male organ, by which a few drops of urine escape. From behind, two vertebral columns are seen, two sacrums, and three buttocks, the central one evidently being due to the fusion of two, and in it is a rudimentary anus. The true anus serves for both children. Each individual has power over the corresponding leg and not over the other; thus the right leg obeys the will of the right twin named Baptiste, the left that of the other twin named Jacob. Walking is therefore impossible, although the legs are strong. Each child is said to possess a distinct moral personality. Sometimes one is laughing when the other is crying; one may sleep while the other is awake. Usually the head and face of each is inclined laterally, but if one is held perpendicularly the other becomes almost horizontal. The condition of sensation in the legs is not stated in the account.—*Lancet*, Jan. 21, 1882.

Hygienic Value of the Electric Light.—The French scientific journal *La Nature* summarizes a communication from Dr. Javal, who believes that the electric light is absolutely without danger to the sight, in consequence of the amount of division which can now be obtained in it. *L'Union Médicale* also reminds its readers that similar researches of great interest from a scholastic point of view were published in that journal in May and July, 1881, including the researches of Dr. Cohn, of Breslau, who found that the electric light increases sixfold, as compared with daylight, the perception of yellow, and doubles the perception of green and blue. The observations of Dr. Blasius and Dr. Hoppe, in a discussion which took place at a meeting of the Brunswick Society of Natural Sciences, are also noteworthy. These scientists have shown that illumination by the electric light deserved preference over all other methods in use, for the following reasons: 1. It does not pollute the air with deleterious gases or other unhealthy products; 2. It induces a greater visual unity than with daylight or gaslight. The conclusion adopted by the meeting was that "the hygienic qualities of the electric light have not hitherto been appraised at their real value."—*British Med. Journ.*, Jan. 28, 1882.

Removal of the Uterus.—Dr. Atthill, Master of the Rotunda Hospital, removed the greater portion of the uterus last week, by a modified Porro's operation. The patient had suffered intensely for a long time previously. Malignant disease of the fundus of the uterus was diagnosed. The nature of the proposed operation and its risks were explained to the patient, who readily acceded to its being performed as a possible means of relieving her from her sufferings. She unfortunately succumbed thirty hours after the operation. Microscopical examination of the diseased portion of the uterus showed it to be an epithelioma. The cervix had not been encroached upon by the new growth, but a small portion of the latter had been left in the stump. There was little or no hæmorrhage. Death was probably due to collapse, but there was *post-mortem* evidence of acute septic (?) peritonitis. The specimen was exhibited at the last meeting of the Pathological Society of Dublin.—*British Med. Journ.*, Jan. 28, 1882.

Collège de France.—The Minister of Public Instruction has just determined upon the erection in the neighborhood of the Collège de France of a laboratory of biological physics. By the same decree Prof. Brown-Séquard and M. d'Arsonval, his assistant, are made directors of the laboratory.—*Gaz. Méd. de Paris*, Jan. 28, 1882.

REGISTRATION METHODS IN BRUSSELS.—In the city of Brussels, whenever a birth is registered, the Registrar hands to the parent, gratuitously, a little pamphlet of five pages, containing short and plain directions for the management of children. In Paris, where the mortality among infants is enormous, it is proposed to introduce a similar practice.

ABOUT THE BLIND.—According to the census returns, there are 3907 blind persons in the State of Pennsylvania.

The "Pennsylvania Institution for the Instruction of the Blind" will receive applicants between the ages of ten and twenty-five.

The "Pennsylvania Working Home for Blind Men" will receive those between the ages of twenty-five and fifty, to learn trades and receive employment therein.

And the "Pennsylvania Industrial Home for Blind Women" will instruct and employ blind females of twenty-one years and upwards.

These institutions are located in Philadelphia; the last two are supported mainly by legacies and benevolent contributions.

A WARNING TO DOCTORS.—The Chinese authorities of Shanghai recently issued a quaint decree respecting the neglect of physicians to attend at once on their patients, and the high fees which they charge. They give notice that it is the duty of all physicians to use their knowledge for the benefit of the people; when people are sick they must be ready to attend upon them whenever they are sent for, without regarding the hour of the night or day, or the state of the weather. When people are ill they long for the presence of the doctor as the grain of seed longs for the rains. Instead of doing this, however, the physicians now think that they possess great skill, and not only charge high fees, but insist on being paid full hire for their chair coolies, and they do not care what becomes of the patient so that they get their fees. If these were only charged to the wealthy it would not so much matter; but the poor have to pay them also. An evil practice (the decree declares) also exists by which doctors will not visit their patients before one o'clock in the afternoon. Some will even smoke opium and drink tea until late in the evening. These are abuses, the magistrates say, which they will on no account permit. Doctors must attend their patients at all times. They must, if necessary, visit them several times daily; they must think more of them and less of their fees. Notice, therefore, is given to all officials and people, that a physician who does not attend when he is called, must only receive half his fees and half his chair hire. "If you physicians delay your visits, you show your wickedness, and sin against yourselves." The decree is a model one for a paternal government; argument, entreaty, objurgation, exposition, threats, are all mingled in due proportions.

In order to secure a proper degree of attention on the part of the native physicians, foreign merchants who employ them to attend their Chinese servants and other employés, are in the habit of paying them by the year, and docking off a proportionate amount for the time lost by their days of disability from sickness. This makes the physician anxious to cure the patient as soon as possible, so that his pay shall go on.

INCREASE OF THE PEABODY BUILDINGS.—On December 31, 1881, no fewer than 11,459 persons were in residence in the various groups of Peabody Buildings, showing an increase of 1565 upon the number at the end of 1880. This increase was mainly due to the completion and occupation, during the year, of two new groups of buildings: one in Whitechapel, and the other at Bedfordbury. The Whitechapel buildings were partly tenanted during June, and at the end of the year contained 1200 inhabitants. The smaller block of buildings, at Bedfordbury, contained 116 inhabitants at the end of September, but at the close of the year the residents had increased to 623. These new buildings at Whitechapel and Bedfordbury had 1823 inhabitants at the close of last year; it follows, therefore, that the residents of the older buildings were rather less numerous than at the end of 1880. It is scarcely possible to overrate the eventual beneficial influence of the Peabody fund upon the dwellings of the working classes in London, since the fund is increasing at compound interest. We await with interest the annual report of the trustees on the health of the residents in the Peabody Buildings during last year. Further efforts are, however, required to teach the working classes how to live healthily in healthy dwellings.—*British Med. Journ.*, Feb. 18, 1882.

PRIZES OF THE GENEVA RED CROSS SOCIETY.—The International Committee of the Red Cross, in Geneva, offers three prizes, each of the value of 2000 francs (£80), for the best essays in (1) improvisation of means of treating the wounded; (2) improvisation of means of transport; (3) improvisation of an ambulance or a field-hospital. The essays, which must not have been previously published, may be written in French, German, or English. The successful essays will become the property of the Society, which reserves the right of publishing them either in the original or in translation. Essays in competition may be sent up to April 1, 1883, to the President of the International Red Cross Committee, 8 Rue d'Athenée, Geneva.—*British Med. Journ.*, Feb. 18, 1882.

DIED, in this city, on the 7th of March, aged seventy-seven years, JOSEPH PANCOAST, M.D., Emeritus Professor of Anatomy in Jefferson Medical College. Dr. Pancoast was born in Burlington County, N. J., in 1805. He studied medicine at the University of Pennsylvania, and graduated in 1828. In 1838 he succeeded Dr. George McClellan as Professor of Surgery in Jefferson Medical College, and in 1861 was transferred to the Chair of Anatomy. In 1873 he resigned his professorship, and was elected Emeritus Professor of Anatomy. In our next issue we shall present a full sketch of the career of this eminent surgeon.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 28, TO MARCH 6, 1882.

COMEGYS, E. T., *Captain and Assistant Surgeon.*—Assigned to duty at Fort Stanton, New Mexico, relieving Assistant Surgeon Newton.—*S. O. 40, Department of the Missouri, February 21, 1882.*

SPENCER, WM. G., *Captain and Assistant Surgeon.*—Relieved from duty in Department of the Columbia, to proceed to New York City, and, on arrival, report by letter to the Surgeon-General.—*S. O. 46, A. G. O., February 27, 1882.*

POWELL, J. L., *First Lieutenant and Assistant Surgeon.*—Fort Stockton, Texas. Granted leave of absence for one month.—*S. O. 19, Department of Texas, February 24, 1882.*

NEWTON, R. C., *First Lieutenant and Assistant Surgeon.*—When relieved by Assistant Surgeon Comegys, to proceed to Fort Cummings, New Mexico, and report to the Commanding Officer for duty.—*S. O. 40, C. S., Department of the Missouri.*

FRANTZ, JOHN H., *Major and Surgeon.*—Died at Baltimore, Md., on March 2, 1882.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

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ORIGINAL LECTURES.

ADDRESS TO THE GRADUATING CLASS OF BELLEVUE HOSPITAL MEDICAL COLLEGE.

Delivered March 15, 1882.

BY JOHN S. BILLINGS, M.D.,

SURGEON U. S. ARMY.

I VAGUELY remember that once upon a time—a long while ago it seems, for I look back at it across the gulf of a great war, in which the days were like weeks, and the months almost counted for years—I spent one evening on a platform in a large hall, in the character of a new graduate in medicine. A part of the ceremonies on that auspicious occasion consisted of a valedictory address to the graduates, delivered by the most eloquent member of the faculty—an address which was highly praised, but of which I have vainly tried to remember either the ideas or the phraseology. Fearing that this specially localized loss of memory might be a symptom of a new nervous disease which I should have to name and describe, I have consulted several of my medical friends as to their experience in this respect, and I am much pleased to be able to say that I have found very few who have not totally forgotten the words of congratulation and of counsel given to them when they received their diplomas.

Nor is the reason of this far to seek. The new doctor, in the pride and vigor of youth, just stepping out of leading-strings, and realizing that he is really his own man at last—standing at the threshold of that wonderful, glittering world which beckons him on so enticingly, and in which fame, and love, and wealth await his coming—this learned and skilful physician is held back yet another hour, and compelled to listen to advice from one whom he does not know, but who can surely have nothing to tell him beyond some well-worn platitudes about the dignity and honor of the profession which he has chosen, and that if he will be virtuous he will be happy, or words to that effect. Small wonder then that, after a moment's attention, his thoughts wander, and he drifts away on that beautiful river of revery upon whose banks are Spanish castles unmatched by those of the Rhine or the Danube, and which are in strange contrast to the practical, prosaic, warehouse sort of a view which his orator is trying to present. If, therefore, I observe five minutes hence that some of my special audience here, the new graduates, are gazing reflectively upon some point of infinite distance, or are evidently magnetized by some particular wave in the sea of this other audience before me, I shall know that it is all quite as it should be, and that my remarks are fulfilling their purpose.

Being unable, as I have just explained, to remember what was said to me by way of valedictory, and never having been present at a similar ceremony from that day to this, I thought it would be prudent to consult the literature of the subject and find out what is usually said upon such occasions. For this purpose I have examined about a hunded valedictory addresses, and have obtained from them a vast amount of instruction, and some little amusement. From them I gather that this is an epoch in your lives, that you are entering a remarkable age of the world's history (it is customary here to allude to steam and electricity), that you live in the most wonderful country under the sun, and that the eyes of the world are upon you. All are agreed upon these points, and also as to the importance and dignity of the science and art of medicine, and the necessity of continued study on your part to keep pace with its advances. But the addresses are not equally harmonious on all points. Some of them assert that the condition of medical education in this country is not altogether satisfactory, that there are some medical colleges (not, of course, the college of the graduates, but some other medical college) which might be spared, that there are too many doctors now, and more coming, and that some of these not only have not as clear ideas about the precession of the equinoxes, or the authorship of the book of Job, as a member of one of the learned professions should have, but that there are even graduates in medicine (of other schools, of course), to whom the addition of vulgar fractions is a stumbling-block, and correct spelling vexation of spirit. On the other hand I find some who assert, first, that the above statements are unfounded; second, that it is not necessary to know how to spell correctly in order to cure the chills or set a broken leg; and third, that the demand for higher medical education is essentially a pernicious aristocratic movement, calculated to oppress the poor, and prevent them from obtaining the sheepskins so desirable to cover their nakedness. As, however, I am sure that all of you are just now strongly in favor of higher medical education, without regard to what you may have thought about it a few weeks ago, or what you may think of it a few years hence, when you get a little steam-hatching machine of your own, I feel that I shall most contribute to the harmony which this occasion demands by—entirely agreeing with you.

Upon the whole, I came to the conclusion that on this occasion it is safest to talk platitudes; in fact, I must do this if I am to advise you as a body. The inexorable laws of statistics tell me that among you are those having the most diverse capacities, purposes, and destinations. Two or three of you will go on with your studies for the next ten or fifteen years, observing, experimenting, reading, and comparing, until some fine day you will know something that other people don't know, and will become writers and teachers, leaders in your profession, famous in your day and generation. One or two of you may become popular physicians, for whom being called in consultation is an everyday matter, and a large income a matter of course. Many of you will become plain, solid, common-sense practitioners, who will do a vast amount of good, be indispensable to the comfort and safety of the community, and be happy because satisfied, which is more than I can predict of the others. A few will abandon medicine because it does not pay, and turn to some occupation of better promise. And one or two will slip farther and faster down the broad, smooth path of dissipation on which their feet have already taken the first step, and will pass on to the inevitable end.

Fortunately for all of us, nobody knows who are to be the black sheep and who are to win the prizes. Each of you must live out that which is in your brains and blood, the result of generations gone before; but, you have also to live out that which you yourselves add to the inheritance.

Now you are going out into Vanity Fair duly armed and equipped, and provided with maps and guide-books of the latest and most approved editions. Probably you will never again be so fully conscious of, or so thor-

oughly satisfied with, your knowledge of the science and art of medicine as you are to-night. What would I not give now to know as much as I thought I knew the day I received my diploma. And yet the seven world problems of Du Bois-Reymond are still unsolved.

I congratulate you on your prospects. Shall I tell you what some of them are? Our American life will present to you as much variety, as vivid contrasts, as subtle mysteries, and as many giants, demons, and sirens to be overcome or outwitted as any that the legends of old depict. No doubt you will soon come across some of that curious sect, the *antis*, who are beginning to make their appearance amongst us; anti-vaccinationists, antivivisectionists, anti-anything, so that it gives them an excuse to keep their names before the public. And when you are asked how you account for the voluminous statistics and startling facts which some of these antis produce so rapidly and easily, you may hesitate a little, unless you have heard the celebrated conundrum which I am about to give you. A little boy said, "That girl is the daughter of my father and my mother, but she is not my sister. How do you account for that?" And the answer is (this is strictly confidential), that the little boy lied. Taking them all in all, these antis are a curious class of cranks, worthy of careful study on the part of some of our experts in mental diseases, during the brief intervals in which they have no medico-legal case on hand. Some of them are quite honest in their convictions, and all are very theological and emotional in their appeals, and to this they owe what success they have in achieving notoriety; and yet, while professing the most humane sentiments, they are unscrupulous even to cruelty in carrying out their fantastic ideas. They will not greet your coming on the stage of action with any particular enthusiasm, but you must not be discouraged on that account.

You will find, also, that the manufacturing pharmacist is abroad in the land, and that he, on the other hand, will be very glad to make your acquaintance. He will not only supply you with toothsome preparations, neatly put up in artistic packages, but he will tell you what they are good for, in what doses to use them, and, most important of all, which of them are in accordance with the code of ethics. He will ornament your office with innumerable samples, and pleasantly interrupt and variegate the perusal of your medical journals by means of blue, green, and yellow advertising sheets, unexpectedly and neatly inserted. Under his friendly guidance the path of medicine becomes a flowery one, for all that you have to do is to decide upon the name of the disease of your patient, and then look over the advertisements and samples to see what will cure it.

Moreover, there are some canvassers, and publishers and editors, who are prepared to be your best friends if you will only permit it. They want you in the first place to subscribe, and then to write; to produce from the stores of your knowledge, items, and essays, and papers, to help them to raise the standard of American medical literature, until it shall be high above that of the effete despotisms of Europe. Nor are these the only persons who await your coming. You are wanted in Medical Societies, the advocates of higher medical education rely on your support, Boards of Health and Registrars are looking to you to make their statistics perfect and complete, and Army and Navy Medical Examining Boards are preparing fresh lists of questions for your benefit. But perhaps you flatter yourselves that you have now passed your final examination. Never was a greater mistake. Your most severe and continued ordeal is just about to begin. And it may be that the result will give rise in some of your minds to serious doubts as to the value of the Darwinian theory about the survival of the fittest. But at all events I can assure you that you need have no fear as to there not being room for you, or that the world has not work enough for you to do. You know the old saying, "There is always plenty of room on top." But even in the lower stories there is plenty of standing room. There are to-day between one and two millions of sick persons in the United States, and the deaths for this year will certainly be a million. You see, therefore, that the sanitarians, whom some of you may, unwisely, look upon as enemies, since they are trying to do away with some of the causes which necessitate your services, have, at all events, not yet seriously injured the business of the profession. And for your further encouragement I will predict that it will be a long time before they succeed in doing this, for whatever variations the changing seasons bring to our other harvests, the fool crop continues with almost unvarying regularity.

While I am on this subject, however, let me advise you from the business point of view, as well as on account of your interests as citizens and humanitarians, to look into this matter of preventive medicine a little more closely than you have yet probably had time to do. It is going to be a very important matter in your day and generation, and you will be examined and cross-questioned on it to an extent which you little suspect. Some of you will no doubt be called to act as members of Boards of Health, and all of you are sure to be appealed to on questions of ventilation, house drainage, school hygiene, pure water, adulterated food and drugs, and the means of shunning or putting away the pestilences, which will consume, not only the children of other people, but your own also, if you cannot answer the sphinx's riddle.

You will find that public health legislation is a matter to which you cannot remain indifferent, for you will become part of the machinery whether you wish to or not, and if you are wise you will study the subject so that you can aid in shaping this legislation to what it should be, for in this respect knowledge is power. If you leave the matter to sentimental enthusiasts and professional office-seekers, you will find that it will turn out like the Irishman's ale—it will thicken as it clears. One of the matters just alluded to touches your professional work very nearly, and that is the adulteration of drugs. If you practice in a large city, this is not of so much importance, since you can always readily find first-class pharmacists, upon whose preparations you can rely, but away from the great centres, the case is different. Unless you can depend upon getting what you call for in your prescription, what success can you hope for? and yet unless you know what apothecary is to fill that prescription, you cannot rely upon it. And it is always wise not to conclude that your treatment has failed until you have made sure that what you ordered has really been given.

And in this immediate connection, permit me to remind you why the hyrax has no tail. It is written in the mystic volume of St. Nicholas that when the world was about being completed, notice was issued to all the beasts that, if they would go to the Court of the King on a certain day, they would be handsomely finished off with tails. All were pleased with the prospect, but the hyrax was especially delighted. Now when the appointed day came, it was cold and rainy, and the hyrax did not like to go out in bad weather. So he stood in his door and asked the lion and the wolf and several others to bring him his tail, and they all promised to attend to it. But they all forgot it; and when the hyrax went himself the next day to see about it, he found that the supply of tails was exhausted. That is why the hyrax has no tail, and if you rely on what other

people tell you that they have done, or are going to do, for you, the result will probably be about the same.

And just here permit me to give you an entirely new bit of advice; at least, I did not find it in any of the valedictories I read. You will, of course, never ask a man who is not acquainted with you personally to give you recommendations or testimonials; but see to it that you yourselves never sign a recommendation for a man whom you do not know. Do not be persuaded or bullied into doing this by people whom you know, for people whom they know, but you do not. If you wish your name and opinion to have any value in the eyes of other people, respect them yourself.

Do not be in a hurry to write or teach. The American press has been said to be chronically premature, and the same may be said of a good many graduates—not, of course, of this school, but of some other schools; and not only in this country, but in other countries. There are a great number of men, in all professions, and in all parts of the world, of whom it may be truly said, that if they knew more, they would say less. Try to know something of all branches of science, for they all throw light upon your work; and at the same time try in some one branch in your own special field of study to know more than anybody else, and to be sure that you really do know it. This is not so difficult as it may seem. You will not have to go far in any direction before you will come upon that which is doubtful or unknown—questions which as yet have no answers. And if, during your pupilage, you have learned to think, and are not, as Holmes phrases it, merely "phonographs on legs," the rest is a mere matter of detail, and this advice is not difficult to follow. Hesiod said that in his day there were three kinds of men—those who understand things of themselves, those who understand things when they are explained to them, and those who neither understand things of themselves nor when they are explained to them. That was the classification in Greece over two thousand years ago, but it is a convenient one for use even now; and when a man has settled for himself to which class he belongs, his education has taken a long stride.

Each of you has his aspirations—a little vague, no doubt, but none the less real. Keep them as long as possible, and, above all things, do not assume or affect a cynicism which belongs neither to your age nor your experience. Second-hand misanthropy is like a second-hand Chatham Street coat: it never fits. No doubt you all desire to make money; not for the money's sake, but for what you can do with it. It is not a desire to be ashamed of, and the business side of your profession demands your careful attention. But mark this: The best works in this world are not done for money, or from selfish motives of any kind. And if you are to achieve true success—the success which brings happiness, and is the only kind worth seeking—you must do a vast amount of work, not for money, but in part because you like it, and in part because it will do good and help others. Do not wait for the opportunity to do some great thing. Take hold of the work that lies next your hand; work which you can do, and which ought to be done—it will be very strange if there is not always something of that sort waiting for you; and do not dawdle, and defer, and lose the good, in a vain waiting and longing for the best.

Be healthy, brave-hearted, and joyous. Physical health is unfortunately not contagious, but mental and moral health is. Avoid second-hand philosophy, sickly complainings about the evils and miseries of life, and small beer of all kinds. No doubt you will find many of your golden dreams fading into gray mists; but, on the other hand, you will be continually stumbling against solid realities, which are quite as good as any dreams if you only recognize the opportunity. Labor and trouble you must meet; but of the first you can for the most part make a pleasure, and the second should not be pampered and made a luxury of. Never pity yourselves. Do not waste your time in vain speculations as to the why. Remember that bitter little poem of Heine's:

"By the sea, by the dreary, darkening sea, stands a youthful man,
His head all questioning, his heart all doubting,
And with gloomiest accent he questions the billows.
Oh, solve me life's riddle, I pray ye, the torturing ancient enigma
O'er which full many a brain hath long puzzled. . . . .
Tell me, what signifies man? Whence came he hither?
Where goes he hence? . . . .

"The billows are murmuring their murmur unceasing,
Wild blows the wind, the dark clouds are fleeting,
The stars are still gleaming so calmly and cold.
And a fool is awaiting an answer."

In the majority of valedictory addresses which I have examined, there was more or less special advice about medical ethics, and a word or two on this subject is therefore not out of place. The code—or perhaps I should now rather say the codes—of medical ethics are great mysteries to the public at large. By many it is supposed to be a sort of trades-union set of rules designed to protect the business interests of physicians, without any particular regard to the rest of the world. I need hardly say to you that this is not true. It may be summed up in this, that a physician should be a gentleman, and should treat other physicians and his patients as he would wish to be treated under like circumstances. And your duty in this matter is to attend to your own ethics and not those of other people. Medicine is not a rigid system of rules and formulæ as it was in ancient Egypt; a fixed creed to which you are to subscribe, and from which you must not vary. It is a living, growing thing, making use of every resource which the progress of science brings; it is truly eclectic and catholic, testing all things, and holding fast to that which is good. It is not a system which forbids the use of any particular remedy, or limits its followers within the narrow bounds of any sect or ism. There are such systems, and there are a few men who advertise themselves as followers of such systems, and who really do follow them. There are also many men who so advertise, but who really do not follow them. Some of these last are well-educated physicians, "but they are—that is to say, from the point of view of a gentleman, they must be considered as—in short, the more you know of their methods the more fervidly you will assent to what I have not said about them."

One of the latest authoritative expressions of opinion on this subject is the following resolution recently adopted by the Royal College of Physicians in London:

"While the College has no desire to fetter the opinion of its members in reference to any theories they may see fit to adopt in connection with the practice of medicine, it nevertheless considers it desirable to express its opinion that the assumption or acceptance by members of the profession of designations implying the adoption of special modes of treatment is opposed to those principles of the freedom and dignity of the profession which should govern the relations of its members to each other and to the public. The College, therefore, expects that all its fellows, members, and licentiates will uphold these principles by discountenancing those who trade upon such designations." This last sentence touches the root of the difficulty. *Those who trade upon such designations.* Let us take a concrete example. You treat a case of pemphigus with arsenic. You may theorize as you like about the essential nature of pemphigus; you may select arsenic because you think it would produce the disease, or because you think it produces something contrary to the disease, or for no reason whatever beyond the empirical fact that you

have seen a case of pemphigus recover under the use of arsenic. Also, you may give this arsenic alone or combined with other substances, and in any doses that you please, from the decillionth of a grain to a grain, and you may explain the results as you like. But as an educated physician, and a gentleman, you may not advertise yourself as an arsenio-pemphigist, and denounce every one who does not adopt your theory and practice, and as there is a good deal of common-sense truth in the old adage, that a man may be known by the company he keeps, you will not have more to do than you can help with the men who do so advertise themselves; and still less will you have to do with those who advertise themselves as antiarsenio-pemphigists, and then treat their cases with arsenic after all, and claim the results as due to dynamized brickdust.

And please observe that this is all that you have to do. You are not to enter into controversies with them or about them, you are not to repine over their success or exult over their failures. They have another code of ethics from your own; that is all that need be said about it. Thus far I have been speaking of fairly educated sectarian physicians. As to the ordinary, uneducated, and bill-distributing quack, with his sure cure for cancer, or his pure vegetable specific for coughs, rheumatism, and dyspepsia, you may be sure that in the long run he will make rather more business for you than he takes away. Do not fall into the error of supposing that legislation can prevent the existence of this class of men, or that you need the protection of the law against them. The public interest demands such protection, if for no other reason than to secure a proper registration of the causes of death of all citizens, and it is not only your right, but your duty, to call the attention of legislators to these interests, but never seek protection on your own account.

Be honest to yourselves as well as to other people, and do not be afraid of admitting that you do not know, or feel bound to attempt an explanation of all that you see or do. He who would know anything thoroughly must be content to be ignorant of many things. Try to define to yourselves, as clearly as possible, your own ignorance; it is the first step towards remedying it, and be sure that the modest student, whether he be undergraduate or learned professor, will everywhere meet with helping hands in the great brotherhood of science.

There are many men who are honest in purpose, and yet who are constantly, although not consciously, untruthful; they see that which they think they ought to see, and not that which is.

I am reminded that this is a valedictory address, and that in it I must bid you farewell. This I do in behalf of your teachers, whose unavailing regrets that they are not to have another opportunity of meeting you in the examination-room, you can imagine much better than I can describe. What they could do for you they have done. And now, as Emerson says, "We have accompanied you with sympathy, and manifold old sayings of the wise, to the gate of the arena, but 'tis certain that not by strength of ours, or of the old sayings, but only on strength of your own, unknown to us or to any, that you must stand or fall." You may be sure of our best wishes for your success and happiness.

"Who misses or who wins the prize, go lose or conquer as you can;
But if you fall or if you rise, be each, pray God, a gentleman."

But while I bid you farewell as students, I also bid you welcome to the ranks of the profession. And I can assure you, that upon the whole, you are coming into very good company. If in anything I have said this evening I have seemed to speak lightly of the medical profession or its adjuncts, I hope it will not be construed as more than the ordinary banter in which we boys sometimes indulge when we get off in a corner by ourselves.

I have much faith in the advice of that anonymous writer who said—

"Oh, never wear a brow of care, or frown with rueful gravity,
For wit's the child of wisdom, and good humor is the twin.
No need to play the Pharisee, or groan at man's depravity;
Let one man be a good man, and let all be fair within.
Speak sober truth with smiling lips; the bitter wrap in sweetness,
Sound sense in seeming nonsense, as the grain is hid in chaff.
And fear not that the lesson e'er may seem to lack completeness,
A man may say a wise thing, though he say it with a laugh."

It is true that you are entering, nay, in your medical studies you have already entered, a world of labor, and pain, and sorrow. You will see how the destruction of the poor is their poverty, and how the sins of the fathers are visited upon the children; how neither culture, nor wealth, nor power, can forever put off the evil day; and how there is, at last, one event to all the sons of men.

You must be prepared to deal with anxiety, fear, grief, and despair, as well as fever and physical pain; you are to be not only physician, but friend, confessor, guide, and judge, and you cannot avoid these responsibilities if you would, nor should you if you could.

Nevertheless, I can assure that you are also entering a beautiful world, where the very shadows prove that plenty of sunshine exists, a world of brave men and good women, whose best and noblest characteristics are brought out most clearly and vividly in such scenes as those in which you will be called to act. But remember, that as a rule, you will find only what you seek and believe in. Remember, also, that this knowledge which you have acquired, and are yet to acquire, is entrusted to you as a power, a power none the less real, and involving no less responsibility because it is accompanied by no special outward insignia of authority or rank.

By the help of this knowledge you are to get wisdom—that wisdom which always lingers, and sometimes comes too late; that wisdom of which it is written that for all the children of men "length of days are in her right hand, as in her left hand riches and honor."

CLINICAL REMARKS

ON MUSCULO-SPIRAL PARALYSIS.

Delivered at the Orthopedic Hospital and Infirmary for Nervous Diseases, Philadelphia.

BY S. WEIR MITCHELL, M.D.,
PHYSICIAN TO THE INFIRMARY.

(Reported by GUY HINSDALE, M.D.)

MORRIS F., æt. thirty, a driver, applied at this hospital November 25, 1881, with the following history: He says that he was well until fifteen weeks ago, when he was thrown off a cart against a railing, striking his collar-bone and breaking it by direct contact. He also states that his shoulder-blade was out of place. The luxation having been reduced and the fracture set, in due time union took place and he returned to his work.

During this treatment his fingers upon the affected side gradually became a little numb, and for a while there was difficulty in moving them. After working for a fortnight, however, he suddenly lost the use of his hand, and was compelled to stop. On being questioned further, the patient states that on November 19, after drinking largely, it being Sunday afternoon, he went to sleep with his arm hanging over the edge of a settee, and that on awakening he found his hand benumbed. The following morning this numbness had increased, but now the arm is mending slightly.

Upon listening to the patient's history we find in the remote distance a possible cause, but which, in all probability, has nothing to do with his present trouble. It is, in fact, a very rare thing to see a fracture of the

clavicle produce great injury to the brachial plexus; but it is strange that such a result does not happen oftener, considering the relations of the various important structures lying in the sub-clavicular region. An account of cases of nerve-injury after fracture of the clavicle and luxations of the shoulder-joint, may be found in my book entitled *Injuries of the Nerves*.

Our patient says that at first he was unable to shut his hand tightly; now his grip is good. He cannot, however, extend the fingers, but is able to flex the second and third phalanges, though not the first.

The ulnar and median nerves perform their functions correctly; the musculo-spiral is the nerve injured. This is evident from what we learn of the man's position during the sleep which resulted in paralysis. His arm being extended, and resting on the edge of the settee at the point where the musculo-spiral crosses under the humerus, injury to the nerve at this point was quite possible. An examination of the muscles brings us to the same conclusion. When, having flexed his arm, I ask this man to resist me as I forcibly extend it, I find that, although he is a right-handed man, his right arm is the weaker. The action of the biceps is as good on one side as on the other, but on the right side there is absence of aid on the part of the supinator longus, which does not contract so forcibly on the affected side as upon the left. The muscles at the back part of the arm, the extensors, are in perfect working order.

The nerve is therefore injured between the points at which arise a branch to the triceps, which is unhurt, and those branches of the musculo-spiral which are given off below. There is no numbness in the forearm; the ulnar and median distributions are not affected. The thumb, however, is numb, and there is some want of feeling on the dorsum of the hand; in other words, the radial—the continuation of the musculo-spiral—has been partially paralyzed. The muscles of the forearm and hand react well under the electric current, when it is applied either to the nerve or to the muscles.

A case of this kind shows the necessity of going carefully into the anatomy of the part. The history would lead one to suppose that the phenomena were due either to the luxation or to the fracture of the clavicle, especially as there is a good deal of callus at the external end of the clavicle. If, however, the disturbances were due to this latter cause, they would have come on gradually; but, on the other hand, they arose abruptly, after sleep.

I have seen a great many of these cases. A man in a drunken sleep lies with his arm pendant over the edge of a chair or sofa, and wakes up paralyzed as to the musculo-spiral distribution. In one case, reported in my book, a drunken man fell in the sleep of intoxication so that one arm rested on the edge of a stone door-step, and the other on the sharp top of one of our old-fashioned foot-scrapers. He awakened with a double radial palsy.

It is a little odd that while, if we may trust the published cases, nerves violently stretched get well readily, nerves compressed like this man's do certainly prove very difficult to restore to absolute health.

The treatment consists in faradic excitation chiefly; and, as the man is already improving, we may with reason hope for a permanent and rapid recovery.

ORIGINAL ARTICLES.

AN IMPROVED PLAN OF USING CHRYSOPHANIC ACID EXTERNALLY.

By GEORGE HENRY FOX, M.D.,
of New York.

It must be admitted by all that no recent addition to dermatological therapeutics can compare in value with chrysophanic acid. External applications of this remedy remove with surprising rapidity the most inveterate eruption of psoriasis, and prove of value in other cutaneous affections. But its action is difficult to control. As all know who have had experience in its use, it is very liable to produce a severe and unexpected dermatitis, and almost certain to ruin the underclothing and bed-linen of the patient. These objectionable features I have endeavored to obviate by adopting the following method of applying the remedy: A soft paste is made by rubbing the chrysophanic acid with a sufficient quantity of water and smeared upon the psoriatic patches, the scales of which have been previously removed, by one or more hot baths, with soap friction. As soon as the paste has dried, which it does in one or two minutes, a layer of collodion should be allowed to flow over each patch and to harden into a protective coating. This will remain in place for several days or longer, according to the location of the patches, and when it falls or is washed off, the application of the powder and the collodion should be repeated. By this procedure the chrysophanic acid in full strength is kept in contact with the affected skin, and prevented from exciting undue inflammation of surrounding parts or staining the clothes. A mixture of the powder and the collodion may be used, but it is less efficacious. A film of the collodion doubtless interferes with the action of the acid upon the skin. A somewhat similar plan which I have tried consists in the use of gutta-percha tissue to retain a strong chrysophanic ointment in contact with psoriatic patches. The edges of this tissue will adhere tightly to the skin if a small camel's-hair brush, dipped in chloroform, is passed rapidly beneath them.

BOVINE *vs.* HUMANIZED VIRUS

AS AFFECTING THE PREVALENCE AND DEATH-RATE OF VARIOLOID.

By CHARLES SMART, M.D.,
U. S. Army.

In connection with the present small-pox service in the city of Washington, D. C., I had occasion recently to inspect a "vaccine farm," from which, during the past month, a number of quills had been obtained for the use of the health office. After examining the details of the propagation of the disease from calf to calf, and the transfer of the matured virus to the quills, I watched the results of the implantation of the virus in forty consecutive cases—inmates of the Deaf and Dumb Asylum, at Kendall Green. Usually in testing virus I have endeavored to have the consecutive cases primary, so that no influence of previous vaccination might underestimate the value of the material. The operations were performed by Dr. Walsh. Of the forty cases, six only were primary implantations. These were successful, and ran the definite and well-known course of the vaccine disease. Of the thirty-four secondary cases, or revaccinations, all presented more or less indication on the arm of a previous operation, and one, in addition, was well pitted from an attack of small-pox, presumably modified by his antecedent

vaccination. In four of these the virus failed to produce its specific local results, while in thirty, among whom was included the individual who had previously suffered from small-pox, the results were successful, that is, the local inflammation, maturation, and crusting ran day by day parallel with the same manifestations in the primary cases, so that from the recent appearances on the arm it could not be said whether an individual case was a primary or a second vaccination. Experiences of this character have no doubt been noted by most physicians who have been making use of bovine virus, but I do not think that the inference which may be drawn therefrom has been placed prominently before the profession.

Of late years the belief has been gaining ground that humanized vaccine has become deteriorated by its transmission from patient to patient through so many years, and that the protective influence has thereby been lessened. Statistics show that the mortality from varioloid is greater now than during the years when vaccination was first practised. But that this is owing to the cause alleged, seems more than doubtful. Many practitioners of large experience believe it to be due to imperfect vaccination from improper crusts and a failure to repeat the operation until a satisfactory result is obtained, or, in other words, that the implantation of a material which may or may not have contained the specific particles, has been too often recorded as successful if any local action followed its introduction, although that action may not have been characteristically specific. No matter which may be the correct view to take of the increased mortality, the first theory has to be credited with the introduction of bovine virus into this country. The certainty of its action, with the facility of obtaining it when required, has led to its general adoption, irrespective of a probable improvement in the immunity statistics, which may be shown in the future.

Humanized virus, when propagated by the arm-to-arm method, is probably as certain in its specific local action as fresh bovine virus; but it is impossible to accomplish a large undertaking in this way. So, also, recent humanized virus on quills, points, glass slips, or in sealed tubes, yields but few failures in primary cases; but these cannot be so generally obtained as the points from the bovine culture. Practically, the bovine quill or point has to be compared with the humanized crust, preserved in wax, and rubbed up when required with water or glycerine, with which general vaccinations not long ago had to be effected. A percentage of failures would occur in primary cases vaccinated with this material, each requiring repetitions of the operation to effect a successful vaccination; while in revaccinations, with a small percentage of characteristic successes, there would be an exceedingly large proportion of anomalous "sore arms," and a certain number of clearly defined failures. When due care was taken to use only crusts which had responded satisfactorily in primary cases, to make two or three aggregations of insertions on each individual, and to infect each aggregation with material from a different source, the vaccinator considered himself warranted in assuming that immunity for a certain period had been conferred on the first or characteristic cases; that the failures were already protected against variola, and that the anomalous cases were vaccinia modified and irregular in its course by the influence of a previous vaccination. If these anomalous cases were really modified vaccinia, the susceptibility to the small-pox poison was exhausted by the operation, and they were entitled to be recorded as successful cases of revaccination. That they were thus viewed and recorded by the majority of vaccinators I feel confident from the large percentages of successful revaccinations appearing from time to time in published statistics — percentages which, in my own practice, I could only approach by including those cases where inflammatory action followed the operation, with crust-formation falling off at various times, say from the tenth to the twentieth day. But it is difficult to feel assured of success and protection in these anomalous cases resulting from humanized virus in a previously vaccinated individual in view of the distinctly specific character of the thirty cases recorded above as resulting from the introduction of the bovine virus. Even the case which had suffered from a previous attack of small-pox presented characters similar in every respect to those of the previously unvaccinated baby. This, however, might be set aside as owing to a peculiar and unusual susceptibility, like that unfortunate case which occurred in this service only the other day, where the carpenter employed on the repairs of the hospital, and selected for that employment because he had already suffered from the disease, became infected a second time, and died. But the absence of any irregular action in these thirty-four revaccinations throws grave doubts upon results which, I believe, have hitherto been regarded as satisfactory.

If modified vaccinia has no existence except as a product of the implantation of the humanized crust, the local action consequent on such an implantation must be referred to the introduction of non-specific organic matters—blood and inflammatory products more or less affected by aeration. And if such cases have gone on the record as successful revaccinations, the spread of modified small-pox, and its increased mortality, can easily be accounted for. Fortunately, while indicating the probable origin of the increased prevalence and severity of varioloid, the bovine virus may be expected to remedy the evils, although time must necessarily elapse before statistics can be brought forward to specify its influence.

IDIOPATHIC GLOSSITIS, TREATED BY ATOMIZATION—SPEEDY RECOVERY.

BY E. STUVER, B.Sc., M.D.,
OF RAWLINS, WYOMING TERRITORY.

I WAS called to see J. M., æt. twenty-one years, laborer, at 5 P. M., January 4, 1882, and ascertained that about two hours previously he had been taken ill, quite suddenly, with a severe pain in the region of the tongue and fauces, headache, and general malaise.

For a day or two preceding this attack, he had

noticed an impairment of appetite, slight headache, some soreness of the throat and muscular system, but did not desist from his usual employment.

I found the patient greatly perturbed, with a highly flushed face and quite profuse perspiration; pupils about normal in size; sclerotic somewhat injected; no photophobia. On inspection, the following was noted: Pharynx, tonsils, and pillars of fauces hyperæmic and tumefied; tongue slightly swollen, painful on pressure, and covered posteriorly and centrally by a light-brown fur, with clean, red, and fiery-looking tip and edges. Submaxillary and sublingual glands slightly enlarged, and deglutition somewhat painful. Alvine and urinary discharges normal, temperature 102° (Kew), pulse 100. Gave a calomel-and-jalap cathartic, to be followed in the morning by a saline, also a gargle of potassium chlorate and tr. ferri. chloridi., in aqueous solution.

January 5. He did not rest well during the night, and this morning tongue is quite extensively swollen, almost entirely filling the oral cavity; coating still remains, but the edges and tip are glazed, of a yellowish color, due to the infiltrated serum; respiration is somewhat impeded, and deglutition entirely prevented, except small quantities of liquid. Gave fifteen to twenty grains sulphate of quinia this morning, and recommended incision of the tongue, but this was objected to. Temperature 102°, pulse 100.

5 P. M. The enlargement progressively continued during the day, and now the organ entirely fills the oral cavity and protrudes between the teeth. Pressure causes great pain; respiration is considerably embarrassed, and deglutition entirely prevented. There is great lividity of the face and anxiousness of expression, together with considerable pain and restlessness. Temperature 102⅘° Fahr., pulse 104.

Incision was now strongly urged, but not allowed. I now resorted to atomization for the relief of the symptoms; a Codman & Shurtleff's steam atomizer being used. A spray of alumen ℈i., to aqua f℥i., was applied for about ten minutes, and then replaced by the following solution, viz.:

℞. Ammonii hydrochloratis, ℥iii., aqua, f℥viii., misce, which was used about twenty minutes. Relief was experienced after the first application, the breathing being easier, and the pain modified.

The ammonium hydrochlorate solution was used four times during the night, about thirty minutes each time, and on the following morning, January 6, there was a great improvement, the tongue being reduced about one-half in size, much less painful, and more natural in appearance; deglutition was improved, and quite a full breakfast of semi-solid food was eaten with relish. Temperature 99°, pulse 78.

The atomization was continued throughout the day, with a constant diminution in the size and painfulness of the organ, and a general improvement of all the symptoms.

P. M. Temperature 98°, pulse 70. The symptoms after this date rapidly subsided, and in two days the tongue had regained its normal condition, and the health been fully restored.

AN INSTRUCTIVE CASE OF SPINAL CARIES.

By V. P. GIBNEY, M.D.,
OF THE HOSPITAL FOR THE RUPTURED AND CRIPPLED, NEW YORK.

A. F. G., male, aged ten, was referred to me at the Hospital for the Ruptured and Crippled by my friend, Dr. H. T. Hanks, *December 10, 1872*. The patient had an ovoid tumor filling Scarpa's space, left side. It was about the size of a hen's egg, was soft and reducible, and an impulse was conveyed as he coughed. It had recently made its appearance; and there was no history of any pain preceding it. It looked very much like a femoral hernia; but the contents of the tumor led me to examine the spine, where I found an angular deformity in the dorso-lumbar region. The diagnosis was thus easily made, and a brace was applied. A piece of canvas was constructed with a lacing, by means of which elastic pressure in the shape of cotton-wool could be made over the femoral tumor. The patient came under treatment in the out-door department, but did not attend very regularly. His mother was very faithful, however, in keeping up the pressure, and by *October 29, 1873*, all traces of the tumor had disappeared.

He did not apply for treatment again until *July 19, 1879*, and in this long interval the deformity of the spine had remained *in statu quo*, and the femoral tumor had not reappeared. The case, indeed, had been regarded as cured, and the angular projection—one-half inch high—was so slight that it could not be detected through the clothing. He returned now on account of a tumor which had appeared within the past three or four days in the left ilio-costal space, and was about one-half the size of that which formerly existed in Scarpa's space. Pressure was applied here, and potass. iodide, gr. v. t. i. d., administered. At the date of next visit the tumor was smaller, and a faint hope was raised that the iodide might prove of value; but this was soon dispelled; for on *October 25* there was a large abscess extending up to the scapula even. This was aspirated, but not more than a half pint of pus was removed thereby. The operation was repeated on *November 1*, but with unsatisfactory results.

On the afternoon of the *3d inst.*, he had a violent chill, followed by high fever, complaining at the same time of pain in the left loin and thigh. The family physician, a homœopathist, gave quinia, gr. xx., in capsule, and I saw the boy at his home on the *6th*, when his temperature was (3.45 P.M.) 104½°, pulse, 140, and respiration 35 and jerking. The bowels were constipated; lungs examined with negative result; talking gave him much pain. The tumor was much larger than before the aspirations, and in Scarpa's space, left side, the old tumor of 1872 had reappeared. This readily disappeared on pressure, but the parts in the immediate neighborhood were very tender.

An incision was made in the cicatrix of the aspirator needle, and about twelve ounces of fetid pus were evacuated, the sac not being completely emptied. Simple dressings were applied, and stimulants freely employed, together with chlorate of potassa and tincture of the chloride of iron.

Nov. 7.—Passed a restless night, although he felt

much better this morning. It is necessary to tent the wound. His temperature this P.M. is 103½°, pulse, 110, and respiration, 38. Incision extended, and at least a quart of thick pus is evacuated, the sac collapsing completely. There has been no reappearance of the scarpal tumor.

Nov 8.—Appreciable improvement this morning, temperature 102°. Quinia added to his medication, in gr. v. doses. P. M. his temperature is 103°. No interruption to the discharge; but the bowels remain constipated. On the following day a good evacuation of the bowels was had, and his temperature was one degree lower. Next day there was delirium to a moderate degree, and his symptoms were altogether worse than on any day since the abscess was opened. He has been compelled to take an opiate at night, in order to secure sleep, and much of his unpleasantness is attributable to this drug. The syrup of lactucaria is substituted for morphia, and, on *November 12*, he feels much better, and his temperature is about normal. He was not seen again until the *18th*, in the evening, when he had a temperature of 104°, and was harassed considerably by a hacking cough, seemingly pharyngeal. Physical signs of lungs were negative. It is still difficult to secure good movement of the bowels. The quinia was increased to gr. xx. per diem.

November 24.—Temperature, 105°. Complains of pain in the right groin, and calf of same side. Nothing found save tenderness in the groin. Under hot fomentations and quinia he was comparatively easy, complaining occasionally of pain in the right groin, and, on the *27th*, I detected a slight fulness deep in the iliac fossa, with appreciable dulness. His temperature was 104°, and pulse, 120.

November 28.—His temperature, 103; lies in dorsal decubitus, with right thigh flexed to an angle of 135°, and extension beyond this limit causes pain. From this date to *December 4*, the signs were very obscure, at one time pointing to a pleurisy, and later to a perinephritis. Yet there was undoubtedly an accumulation of pus on the right side somewhere between the carious vertebræ and the groin. The abscess in the left ilio-costal space was still discharging a little, and, altogether, the case bade fair to be a protracted one. It was quite impossible for me to give the time the case demanded, and I suggested that some one be called in who could give it the required attention.

There were many reasons, the parents urged, why the boy's god-father, the homœopathic physician already alluded to, should assume charge, and I resigned. Be it said, however, to the credit of the practitioner who followed me, the case was skilfully managed, and the history, as I learned it nearly a year later, was that the treatment had been tonic and supporting; abscesses formed in the groin and on the upper third of the thigh, only to be promptly opened and drained. His convalescence was long and tedious. The apparatus was worn faithfully as soon as he began to sit up, and on *December 28, 1881*, he came again under my observation, when I made the following notes:

The patient is healthy, and weighs more than he ever did; walks erect, and quite easily. The spinal prominence measures nearly three-quarters of an inch in height, being only a quarter of an inch higher than when he first came under treatment. The abscesses have long since closed, and consolidation in the vertebræ seems complete. There are four cicatrices on the outer aspect of the right thigh, at about its middle third; two in the right groin, and one in the left ilio-costal space. There is no lameness whatever.

Remarks.—This case well illustrates the tolerance some patients have of disease. Just how long the spinal caries had existed when he first came under treatment, in 1872, we have no means of ascertaining. The psoas abscess was the first sign that was observed. The dispersion of this seems now to have been a mistake; for if vent could have been given thus early to the products of the destructive inflammation going on in the bodies of the vertebræ, he *might have* escaped that long suppurative process which came on five or six years later. I say might have, because it is not a common occurrence for abscesses to form years after a course of suppuration. Sometimes this happens. It is curious to know how an abscess can push its way about large joints, lying on muscles that are the most effectual in movements of the same, and yet leave the functions at the end intact. Now this young man is literally scarred with cicatrices about the right hip, and yet his gait is perfect. He suffered a long time from hectic, and even from septicæmia, and made a good recovery despite it all. By means of apparatus carefully worn, he has only a minimum deformity. True, the disease was located in the region most favorable for treatment, and the result obtained is nothing more than any general practitioner could have obtained with average care. On this account I considered it an encouraging case to report.

FEMORAL ANEURISM

CURED BY DELIGATION OF THE ARTERY AFTER TWO FAILURES BY COMPRESSION. THE LIGATURE FALLS FROM EROSION (CALCAREOUS) AFTER SIXTY-TWO DAYS.

BY C. M. FENN, A.M., M.D.,
OF SAN DIEGO, CALIFORNIA.

DAN W——s, aged forty, for many years a mail-carrier in Arizona, came under my observation and treatment in the fall of 1876. He informed me that during one of his trips across the then hostile region, he was attacked by Apaches and narrowly escaped death. Attempting, during his flight, to pull out an arrow which had transfixed his thigh, he broke the shaft of the weapon, leaving the barb in his flesh.[1] Some hæmorrhage following the difficult extraction of the arrow-head, at the first station reached he was advised to remain in bed for a few days. But the wounds healed so kindly that he was soon able to return to duty. More than ten years after this episode, and about a

[1] I am informed that the battle-arrows of this tribe differ from those used to bring down game, in that they are of less weight, frequently poisoned, and cannot be extracted by traction on the shaft.

year previous to our interview, he noticed a gradual uprising of the tissues overlying the track of the old wound. Pulsation, pain, and impaired locomotion now rapidly succeeded each other, until, unaided, he could no longer "mount the boot." Obtaining a leave of absence, he went to one of the military posts of the territory, where, under the direction of a skilful surgeon, relays of soldiers, with thumb and key, made compression upon the femoral artery for five days.

After resting for a few weeks, he left Fort ——— to seek the advice of a surgeon in a neighboring town. Concurring in the previous diagnosis, a tourniquet and weights were here methodically applied, but with no other apparent result than to increase the swelling and sensitiveness of the limb. Such, in brief, were the main points of his history.

He was much reduced in flesh by reason of the constant pain and consequent loss of sleep, and passed the greater portion of each twenty-four hours in a sitting posture, with the leg elevated upon a chair. Two cicatrices were visible, the larger one on the outer aspect of the limb. At about the junction of the middle and lower thirds of his right thigh, the rectus- and vastus-internus muscles were stretched over a spherical pulsating tumor somewhat larger than a base-ball. The measurement (circumference) of the limb, which included the apex of the swelling, was six inches greater than at any other part of the thigh. Through the stethoscope was heard an aneurismal thrill, which was synchronous with the pulsation, and with it ceased upon compression of the artery above the tumor. Alternate pressure upon the cardiac and distal sides of the swelling produced the usual effects, direct compression also diminishing its volume. The tumor was undoubtedly an aneurism, but whether of traumatic or idiopathic origin it was impossible to determine.

In view of the previous attempts at cure, and not at that time having Esmarch's apparatus (I much doubt its utility under such circumstances[1]), I advised deligation of the artery as, in my opinion, the only practicable remedy. He was eager to submit to the operation without further delay, but his cachectic appearance admonished me to prepare him for the ordeal. In this I was unexpectedly successful, aided by sea air, tonics, and more than all, perhaps, by the prospect of relief held out to him. At a later period his confidence in the method and operator was cruelly shaken by the machinations of an advertising regular(?), to whose influence I attributed a part of W.'s remarkable behavior under the anæsthetic, so carefully administered by Dr. Shearer, U. S. A. Throughout the operation every attempt at manipulation seemed to rouse the patient from a condition of profound anæsthesia to almost complete consciousness. A further explanation of this embarrassing behavior may be noted further on.

Taking advantage of the brief intervals of repose, the artery was sought in Scarpa's triangle, and was dissected out with such care that no blood was lost. The sartorius muscle, crowded high up by the tumor, required unusual and forcible retraction in order to expose the sheath of the vessels. In this situation the femoral artery increased to the proportions of the abdominal aorta, had lost its normal color and elasticity. Its walls, thickened and mottled as if by some adventitious concretition, were so hyperæsthetic that the slightest touch produced reflex movements of the limbs. In brief, the condition of the vessel was such that we made use of a strong ligature, and were especially careful in applying the same.

Pulsation in the aneurism was immediately arrested, the muscular tension yielding measurably at the same time. In the afternoon a marked decrease in the temperature of the limb caused me to envelop it in wadding for several hours. Collateral circulation, however, was soon established, and the subsequent progress of the case left nothing to be desired, with the exceptions to be noted. Unsuccessful attempts to withdraw the ligature were made on the fifteenth and eighteenth days, and at intervals up to the thirty-fifth. The silk was then cut off close to the surface, and permission given the patient to go to Aqua Caliente (warm springs), a place of considerable resort in the interior.

Returning after an absence of three months, Mr. W. informed me that convalescence had been uninterrupted, and that the ligature "dropped out" on the sixty-third day.

As a probable cause of the abnormal condition of the artery, and of the unusual separation of the ligature (the section is ragged and uneven, as if made by the gradual attrition of some hard substance), I have, in the title of this paper, suggested the presence of calcareous concretions in some of the arterial coats. In like manner we may account for the appearance of the aneurism ten years after the injury, upon the hypothesis that the notched and possibly poisoned arrow produced arteritis instead of immediate and traumatic aneurism. Later, as a direct result of the now chronic inflammation, or through the metamorphosis of an atheromatous or fibrinous exudation, osseous particles and scales were developed which occasioned degeneration and aneurism in one portion of the vessel and hyperplasia in another. A somewhat analogous process is observed in atheroma of the aorta,[1] so frequently met with in the course of hospital and other necropsies on this coast. The thoracic aorta is seldom free from this deposit or degeneration, the ascending division often rendered stiff and unyielding by it, while the transverse portion is as often the site of an aneurism more or less developed. In such cases, as in the one under discussion, the destructive change seems to begin at a bent portion of the tube, and chiefly for the reason that the column of blood meets with greater resistance at that point.

It is not, however, necessary to suppose that atheromatous degeneration was the cause of the lesions described, nor to discuss the theories of Virchow and Martin in explanation thereof. Pathology

[1] Since this was written I find that Stimson's valuable paper, on the "Treatment of Aneurism by the Elastic Bandage" (*vide* American Journal of the Medical Sciences for April, 1881, page 328), records a failure by Esmarch himself in a somewhat analogous case.

[1] In the East Prof. S. D. Gross finds this lesion chiefly among persons of foreign birth. Here, it appears, that age and occupation, rather than nationality, afford exemption.

teaches us that the exudation resulting from wounds of the arterial tunics is *sui generis*, and tends directly to the formation of fibrinous and osseous concretions. Andral says this condition of the fibrous coat is frequently found in large arterial trunks, *as the femoral*. His additional statement that a local arteritis may exist for a long time without giving rise to any visible or manifest signs, taken in connection with the mail-carrier's sedentary occupation, may explain the patient's ignorance of the change going on in his femoral artery.

My first impression was that protracted and perhaps rude compression had caused the hyperesthesia and hyperplasia, but I am now inclined to believe that the abnormal features antedated, and possibly rendered abortive, the attempts at cure.

BROMIDE OF AMMONIUM IN WHOOPING-COUGH.

BY FORDYCE GRINNELL, M.D.,
PHYSICIAN TO THE PINE RIDGE INDIAN AGENCY, DAKOTA.

SOME cases of whooping-cough were imported into this agency in the early summer, since which time it has spread from band to band among the seven thousand Indians located upon various portions of this Reservation. Having noted in the August number of *The Medical News and Abstract* the success of Dr. Kormann in the use of bromide of ammonium in the treatment of this disease, I determined to give it a trial.

I had experienced some difficulty in former epidemics in getting children to take the preparations of quinia, and knew especially this difficulty would be increased in the case of Indians, whose prejudices were to be overcome in making a change from their own to "white man's medicine."

During the months of August, September, October, November, and December, 223 cases have been treated with the bromide of ammonium—108 males and 115 females. Of these, 75 males and 77 females, or a total of 152, have recovered; 3 males and 3 females have died, and 30 males and 35 females remain under treatment. In these 65 cases, however, the disease is well under control, and many of them have no symptoms remaining, save those of a mild bronchitis.

In the six cases reported as having succumbed to the disease, all were well advanced in the second or spasmodic stage before they were presented for treatment, and two of them had had repeated convulsions, so that remedies of any kind could have been of little avail. No death occurred in any case treated from an early stage of the disease, and these were not usually presented for treatment until the "whoop" was well pronounced; some, indeed, not until the symptoms were most urgent.

The doses of the bromide given were in accordance with the suggestions of Dr. Kormann, viz., from three-fourths to four grains, as indicated by the age of the child. These doses were given three or four times daily, and at night, when the child was frequently disturbed by paroxysms of coughing. It was usually given in syrup, as the children made no objection to taking it in this form. No other treatment was used in these 223 cases, except the external application of camphorated oil to the throat and chest in the more serious cases.

The success attended by this treatment has been an agreeable surprise to me. It may be said, "Perhaps the epidemic was an unusually mild one, and therefore any of the accepted remedies would have met with like favorable results;" but the fact that a far greater per cent. of deaths occurred among the children not treated at all would indicate the value of the remedies employed. In those camps where a prejudice still existed in reference to the use of "white man's medicine," and where the services of the physician were not sought, there have been two or three deaths in the twenty-four hours in some instances; while, as shown above, in no case where the remedy was timely used, has a death occurred.

In what way the remedy acts to effect such a controlling influence over the disease in so short a time, I leave for those devoting themselves to such researches to determine; but it appears to me that we have in the bromide of ammonium a remedy superior to any yet made known for the treatment of pertussis.

INFLAMMATION OF THE LACHRYMAL GLANDS (ACUTE DACRYO-ADENITIS).

BY S. C. AYRES, M.D.,
OF CINCINNATI.

THE lachrymal glands are so strikingly exempt from both acute and chronic inflammations that the following case may be of interest. The patient was a healthy, well-developed octoroon, who had never had any trouble with her eyes. She had a moderate degree of myopic astigmatism, which, when corrected, brought her vision up to the normal standard.

Mrs. T., æt. twenty-three, gave the following history of her case. For three weeks previous to her application for treatment, she had noticed that the upper lids were becoming so thick and heavy that she could scarcely raise them. It began by a feeling of stiffness in the lids, which was more noticeable in the morning upon waking. The skin of the lids became red and swollen, and felt hot and dry. The symptoms gradually increased, and caused her so much inconvenience, that she finally applied for treatment.

When first seen, she could with difficulty open her eyes wide enough to enable me to see the pupils, and this only by vigorous action on the part of the occipito-frontalis. In looking up, she would raise her head and throw the chin forward, and it was with difficulty that she saw objects to the right or left. The lids were œdematous and swollen even with the forehead. When they were closed, they resembled a case of purulent ophthalmia in the acute stage. There was a slight catarrhal discharge, but in other respects the conjunction was healthy.

The lids had a boggy or doughy feel. The lachrymal glands could be plainly felt below the edge of the orbit on either side, and were sensitive to pressure.

As it did not seem probable that suppuration was about to set in, I painted a band of strong tincture

of iodine, about four inches in breadth, across both upper lids. In two days I saw her again, and found the appearance of the lids decidedly better. I then used adhesive collodion instead of tincture of iodine, and repeated this application five or six times. I also instructed her to foment the lids with hot water several times a day. Under this treatment the lids soon resumed their natural appearance, and in two weeks she was discharged well.

A FENESTRATED CUTTING FORCEPS FOR TREATING NASAL OBSTRUCTION DUE TO DEVIATIONS OF THE SEPTUM.

BY JOHN B. ROBERTS, M.D.,
LECTURER ON ANATOMY AND ON OPERATIVE SURGERY IN THE PHILADELPHIA SCHOOL OF ANATOMY.

THE frequency of lateral deviation in the nasal septum and the annoyance which results when it causes occlusion of a nostril are sufficient reasons for giving attention to the alleviation of symptoms due to it. A very common seat for the deformity is in the triangular cartilage, which forms the anterior portion of the septum. This is often so bent or displaced from injuries and other causes that the nostril on one side is occluded by the apposition of the septum and ala of the nose. The deleterious effects exerted by nasal obstruction upon the mucous membrane of nose, pharynx, and larynx, and upon the voice, are well known; and yet, until recently, few surgeons were inclined to attempt operative interference in cases of deviated septum. Some advised paring away the cartilage which projected into the nostril, but cautioned the operator not to cut so deeply as to perforate the septum; while others spoke of the deformity being practically irremediable.

Recent advances in nasal pathology and therapeutics, however, show the fallacy of these conclusions. An orifice in the septum, allowing direct communication between the two nostrils, is of no real disadvantage, unless the opening is so small as to cause whistling when the air current passes through. Therefore, when the lateral deviation closes one naris, and prevents free ventilation of the corresponding nasal cavity, it is proper to cut away the obstructing cartilage. Often this can only be done by removing the entire thickness of the septum at the most deflected point. Such an operation leaves a free opening between the two nasal fossæ. This causes no special inconvenience, but is, in fact, a great relief to the patient, because, by removing the obstruction, it gives full opportunity for respired air to enter and leave both nasal cavities.

The old method of accomplishing the object was to pare away the cartilage with a scalpel, or to scoop out a piece with a gouge. This is a crude and inaccurate operation, and not adapted to instances of obstruction from deviation in the bony septum. Blandin's forceps, or punch, which cuts an oval disk out of the septum, acts on the proper principle, but is unsatisfactory because the cutting edge, after perforating the tissues, strikes on the flat surface of the other blade. The soft mucous membrane, is, therefore, only crushed or partially torn, instead of being cleanly cut, and holds in place the cartilaginous disk, which must be removed afterwards with forceps and scissors. To obviate this difficulty, I have modified the forceps by placing an oval opening or fenestra in the flat blade, into which the elliptical cutting edge accurately fits; hence, when the forceps is closed, the mucous membrane is readily incised, and a disk of cartilage covered by the soft tissues is cut from the deformed septum.

The removal by the punch of the most deflected part of the septum is usually sufficient to render the occluded nostril patent. If there is still some obstruction, the offending portion of cartilage can readily be trimmed away, and the opening thus enlarged by means of the cutting forceps or scissors.

I have experimented during several months with the ordinary instrument, with one on the flat blade of which I had placed a strip of lead, and with the fenestrated forceps, and find that the last is the most efficient. The others soon become dull, and do not cut out with nicety the entire thickness of the septum. After the punch has been forcibly closed upon the cartilaginous or bony septum, it should be rocked a little from side to side to ensure the entire division of the tissues at its distal extremity where less power is obtained.

The fenestrated cutting forceps can readily be made by any instrument-maker, but it requires care to have the edges well set. The wood-cut is a good representation of the instrument reduced to one-third the natural size. The catch upon the handles is to keep the blades closed, and thus prevent the edges becoming dulled by contact with other instruments.

DEATH FOLLOWING THE ADMINISTRATION OF ETHER.

BY STOYELL C. PARSONS, M.S., M.D.,
SURGEON TO THE NEW YORK DISPENSARY.

ON the 16th of February, 1882, Ellen Slevin, aged fifty-four, and born in Ireland, presented herself at my clinic, complaining of increasing pain and inability to raise her arm; she was of medium height, and a well-nourished woman. Upon examination, I found a dislocation of the humerus in the axilla of five weeks' standing, which possessed more than ordinary motion. Finding her heart and lungs sound, I concluded to administer ether, and so called upon my colleague, Dr. Hall, for assistance.

She passed under the influence of the anæsthetic quite readily, and, after a considerable amount of physical energy, we succeeded in reducing the dislocation.

The amount of ether (Squibb's) used was about six fluidounces, and the length of the entire operation about twenty-five minutes. Five minutes subsequent to the reduction she asked for a drink of water, and

a little later wished to go home; after attending to a few remaining patients, I left her in charge of a friend and the janitor, which was at 12.20 P.M.

At 12.45 P.M., and 1.15 P.M., she again was seen by Dr. Hall, but nothing unusual was noticed; but at 1.45 P.M., the House Physician was notified that she was dying, and he then found her in a cyanosed condition.

She was given two hypodermics of ether of twenty minims each, and three or four of brandy. About twelve to fifteen dry cups were applied over the entire chest, and other stimulative measures resorted to, but all to no avail, death occurring at 12.15 P.M.

The following day, Deputy Coroner Ruefle, in the presence of Drs. R. Kalish, H. A. Bagley, and myself, made the *post-mortem* examination, and found the heart, liver, and one kidney perfectly healthy—the other kidney being slightly fatty; the lungs were deeply congested, thus causing her death.

HOSPITAL NOTES.

PHILADELPHIA HOSPITAL.

(Service of Dr. WILLIAM G. PORTER.)

A CASE OF DACTYLITIS SYPHILITICA.

(Reported by CHARLES W. KOLLOCK, M.D.)

DACTYLITIS syphilitica is a lesion which at times follows syphilis concerning which little was known until Dr. R. W. Taylor, of New York, published in the *American Journal of Syphilography and Dermatology* (January, 1871), a very exhaustive article upon the subject. But seven or eight authentic cases were then upon record, and though this particular lesion must have existed in many more instances, the profession had either failed to recognize it as a sequel of syphilis, or neglected to describe it in accurate and detailed accounts.

An interesting case of this variety recently presented itself in the wards of the Philadelphia Hospital.

C. J., a boy five years of age, was brought here by his mother for treatment. His condition then was indeed pitiable; emaciated and breathing with difficulty, owing to enlarged cervical glands, his life was looked upon as rapidly nearing its end. However, under specific and tonic treatment, he quickly improved, and is now, for one in his condition, a comparatively healthy-looking child. The mother denies ever having had any specific disease, and is apparently a healthy woman. So far as she knows, the father was likewise free from taint, but died of consumption. She admits having borne another child upon whom sores made their appearance about two weeks after birth, and continued to come and go until its death, which occurred when nine months old.

The history of our patient is as follows: He was healthy until two years old, when his eyes became sore, and they were no sooner cured than sores appeared all over the scalp. This condition continued some time, but finally was cured, and the child placed in a home. In June, 1880, the anterior cervical glands began to enlarge and press upon the larynx and trachea, causing dyspnœa, and many times tracheotomy seemed imminent. Just at this period the first metacarpo-phalangeal joint and phalanx showed signs of trouble. Enlargement gradually took place at these points—the color changing from the natural to a violet or purplish hue—but no pain was experienced. The swelling has extended anteriorly to the second phalangeal, and posteriorly to the carpo-metacarpal joints. The metacarpo-phalangeal joint measures five inches in circumference, but at present is not increasing in size. There is no crepitation in the joints, and their movements are normal, except in so far as the hypertrophied tissues surrounding prevent perfect motion. Suppuration has taken place several times, and the exuded material under the microscope is shown to contain pus corpuscles and granular detritus. Dr. Taylor describes this lesion under two heads—one in which the subcutaneous connective and fibrous tissues are the seat of the gummy infiltration, and in the other the periosteum and joints are infiltrated. The case under consideration would seem to come in the first division, though sooner or later the latter parts may be involved.

The glands of the neck break down and suppurate at longer or shorter intervals, and interfere very much with respiration.

The treatment at present is specific and tonic; $\frac{1}{64}$ grain of bichloride of mercury in a teaspoonful of compound tincture of chinchona three times a day. Though improvement is slow, it can be safely said there is no retrogression.

This case is interesting in that it occurred in one so young, and was undoubtedly hereditary, whereas most of those described by Dr. Taylor acquired syphilis in the usual way. But one lesion of the kind has been reported in so young a child, and that was Archambault's case, which occurred in an infant.

MEDICAL PROGRESS.

VACCINATION.—At the quarterly meeting of the Rhode Island Medical Society, in September, 1881, Dr. E. M. SNOW, Superintendent of Health of the City of Providence, spoke upon the subject of vaccination, substantially as follows:

He had had considerable experience in vaccination, having the records of about twenty-six thousand persons vaccinated in his office since he had held the office. He had used humanized virus entirely, taking great care never to get it mixed with the modern "bovine" virus, so-called. The virus used in his office had undoubtedly been transmitted from arm to arm since the time of Jenner, and probably this is the only true humanized virus in the country. The local and constitutional effects of this virus are precisely the same from day to day, as those described by Jenner. His description is perfectly reproduced by the vaccinations every week.

In regard to the protection from small-pox, given by the humanized virus, it is absolutely perfect. Dr. Snow's experience on this point had been so positive and certain, that he had no patience in talking with those who denied that vaccination prevented small-pox. He related some cases.

On one occasion a young lady from Maine was taken with small-pox three or four days after arriving in the city. She was taken to the small-pox hospital, and her mother and brother came from Maine to take care of her. Neither had ever been vaccinated. They went to the hospital, and the next day Dr. Snow vaccinated them. The vaccination in both took perfectly, they remained at the hospital until the case of small-pox, which was very severe, had recovered, and neither the mother nor brother of the patient had the slightest symptoms of the disease.

In another case Dr. Snow was called to see a woman whom a physician was treating for some obscure trouble with the bowels. He found the patient with a profuse eruption, not quite fully developed, of modified small-pox. The tenement had only two rooms, and in the room was a child of two years who had never been vaccinated. This was on Sunday. On the Tuesday following, he

visited the family to vaccinate the child. He found that the woman had been relieved of her bowel trouble by the birth of a child, which was then just twenty-four hours old. He vaccinated the child of two years and the child of twenty-four hours; the vaccination took perfectly, and neither child had the slightest symptoms of small-pox, though both remained with the mother until she recovered.

At another time, March 13, 1859, Dr. Snow was called to visit a case of small-pox on Aborn Street. He found, in a cluster of seven houses, twenty-five families, and in these families ten cases of small-pox, all apparently at about the same stage of the disease. In the same families there were twenty-one children who had never been vaccinated. There being so many cases, it was not thought best to remove them to the hospital. The families, including the unvaccinated children, were quarantined at home, and a guard placed over them. The twenty-one children were vaccinated and compelled to remain at home with the sick. Several other cases of small-pox occurred in persons who had been previously exposed, and it was several weeks before those families were free from the disease; but not one of the twenty-one children referred to had the slightest touch of the disease.

Dr. Snow said the cases he had related were only examples of many more he might give the particulars of; his experience of the protective power of vaccination with humanized virus had been such that he could have no possible doubt upon the subject; his was positive knowledge.

With regard to bovine virus, Dr. Snow had had no experience; he had not used it; but he had known something of its effects when used by others. He had known two cases in which children lost their lives from small-pox because the bovine virus did not take effect. He had known from others, of scores, and probably hundreds of cases, in which the bovine virus failed to produce any result. He believed it was generally acknowledged that the bovine virus, as used in this city, was very uncertain in its results.

He had seen very severe, and even most serious local ulcers produced by the bovine virus, far worse, and more frequent, than he had ever known from the use of humanized virus.

Dr. Snow doubted whether we had yet had a fair and full investigation in regard to the protective power of bovine virus, and several facts had led him to believe that it might fail to give full protection from small-pox. At any rate, as he knew the protective power of the humanized virus to be absolutely perfect, and as, in a large experience, he had never seen any seriously injurious results from its use, he continued to use it without one particle of doubt that he was acting for the best.

Principles Regulating Taxis in Cases of Hernia.—At the meeting of the Southeastern Branch of the Royal Medical and Chirurgical Society, Mr. Clement Lucas read a paper on this subject. He said that obstacles to the reduction of the hernia might arise from conditions external to the sac, or be dependent on the sac itself or its contents. Taking first the external causes, these were, the course and direction of the tumor, constriction at the rings, and muscular action. Contrasting next inguinal with femoral hernia, he showed that in the former the rings were large and more dilatable; hence taxis was more often successful; but in inguinal hernia muscular action was a factor which was absent in femoral. A hot bath might be of service in inguinal hernia, by overcoming the spasm of the internal oblique and transversalis muscles; but in femoral it could do no good, and would only add to the collapse of the patient. Chloroform, besides subduing the pain, relaxed the muscles, and was a greater aid in the reduction of inguinal than of femoral hernia. He protested strongly against anything like forcible taxis in cases of femoral hernia, as the bowel was thereby pressed against the margin of rigid fibrous rings, which presented also knife-like edges. The operation for femoral hernia was almost without danger; that for inguinal more dangerous, on account of its large size; that for umbilical most dangerous, on account of the amount of bowel exposed, and because all drainage went back into the abdominal cavity. Happily, taxis was successful in the reverse order; umbilical and inguinal being more readily reduced than femoral. Obstacles to reduction situated in the sac itself were dependent on the direction of the sac, pouching of the sac, and constriction at its neck or in some part of its course, as in the hour-glass inguinal hernia. Difficulty of reduction from conditions within the sac depended on: 1. The bulk of the hernia; 2. The presence of a quantity of fluid in the sac; 3. The presence of omentum; 4. Adhesions. The evil results of taxis were stated to be: 1. Bruising of the tissues outside the sac, causing them to suppurate if subsequently opened; 2. Reduction *en masse*, or rupture of the sac; 3. Ecchymosis of bowel and hæmorrhage of sac; 4. Rupture of bowel, and consequent peritonitis and death. When herniæ were down, but not strangulated, time was not so important a consideration. If the surgeon failed to reduce at once, he might apply ice, give opium, use injection, and even pressure, and wait; then try again. With strangulation, time was of the utmost importance. The fatality of strangulation was due to two causes—the time during which the circulation was arrested in the bowel, and the severity of the taxis employed. He would limit taxis in femoral hernia to the first twelve hours after strangulation; in inguinal, to twenty-four hours; in umbilical, to two or three days. After failing in gentle taxis at first, he advised that the patient should be put at once to bed, with an ice-bag on the tumor; the pelvis should be raised high on pillows, none being allowed for shoulders or head; the legs should be flexed over pillows; the scrotum (if inguinal, in a male) raised by a small pillow between the legs. An injection of a fourth of a grain of morphia might be given once only. The surgeon next collected his friends, being prepared to operate if necessary. Chloroform being given, taxis was again gently applied; but, this failing, operative interference should be resorted to without further delay. —*British Med. Journ.*, Jan. 14, 1882.

The Operative Fixation of Floating Kidney.—Considering that the extirpation of the kidney is in itself a serious operation, and that, moreover, by the removal of the one kidney an increased function is thrown on the other possibly defective kidney, surgeons will welcome the new method recommended by Hahn (*Centralb. für Chir.*, 1881, No. 29). He has already practised it in two cases of floating kidney (the right in both cases), completely relieving all symptoms in one case, and greatly alleviating the other, where the left kidney was also slightly movable. The patient lying on his left side, a vertical incision is made along the outer edge of the erector spinæ from the twelfth rib to the crest of the ilium, dividing the latissimus dorsi and quadratus lumborum muscles. The kidney, in its fatty capsule, is then pressed from the abdominal side into the wound, and there fixed with six to eight catgut sutures. Both cases recovered without a bad symptom. Since in both cases the kidney became, after a time, again slightly movable, the operator recommends that the fatty capsule should be opened, separated from the kidney, and firmly sutured into the wound, while, also, the kidney should be fixed as low down as it can possibly be drawn.—*London Med. Record*, Feb., 1882.

GANGRENE FOLLOWING THE INJECTION OF MONSEL'S SOLUTION INTO AN ANEURISM OF THE PALMAR ARCH.—Dr. W. W. KEEN reports, in the *Annals of Anatomy and Surgery*, for March, 1882, the case of a girl of seven, who, in 1876, had an aneurism of the superficial palmar arch, following a fall in which she struck her hand on a stone. A physician in Delaware being consulted, injected the aneurism with about ten drops of Monsel's solution. The thumb and all the fingers at once became blanched, and gangrene followed. On the eighth day, the line of demarcation being fully established, amputation above the wrist was done antiseptically. The next day the temperature had fallen from 102.5° to 100°, the child was up and dressed, and in ten days the wound was healed.

Dissection showed that the entire superficial arch, the radialis indices and the ulnar half of the princeps pollicis were all derived from the ulnar artery; hence the involvement of the forefinger and thumb in the gangrene.

THE EMPLOYMENT OF ANTISEPTIC ATROPIA AND ESERINE SOLUTIONS.—KROEMER is of the opinion that the conjunctival inflammation, which is sometimes set up by the use of atropia, is a septic process due to the formation of fungoid growth in solutions which have been long kept (*Klin. Monats. für Augenheilk.*, November, 1881). He found that the addition of salicylic acid to an atropia solution did not prevent it from becoming turbid; that boracic acid had only a slightly preservative effect; but that carbolic acid, in the proportion of 1 in 1000, kept it perfectly clear. Solution of eserine, also, was found to remain clear and almost colorless when treated in the same manner. This proportion of carbolic acid is stated to produce no disagreeable sensation in the eye, and it is said that, since the introduction of these antiseptic solutions, in the clinic at Basle, conjunctivitis from atropia, which was formerly of frequent occurrence, has not been seen.—*London Med. Record*, Feb., 1882.

TRANSIENT ALBUMINURIA.—Dr. F. P. KINNICUTT believes that temporary albuminuria, as it occurs in children and adolescents in apparent health, may be traced in a large number of instances to a transient oxaluria or lithuria, and suggests that the sequence of events in the causation of the albuminuria is as follows:

1. The temporary presence of a large amount of imperfectly oxidized matter in the circulation.

2. A disturbance of the general nervous system, in which the vaso-motor system of the kidney shares, or one confined to the vaso-motor system of the kidney in its elimination of these products of a faulty digestion.

3. A transient dilatation of the bloodvessels of the kidney and a retardation of the blood current in the glomerular vessels, with a consequent possible alteration in the functions of the glomerular epithelium, also of a temporary nature.—*Arch. of Med.*, Feb., 1882.

TUBERCULOSIS.—Prof. RINDFLEISCH (*Virch. Arch.*, 1881, lxxxv.) believes that tuberculosis is undoubtedly an "infection-disease," but one for which mankind has, to a certain extent, established a tolerance, and which, therefore, appears in its original character only in the case of a person where this tolerance does not exist. Immunity from the outward manifestations of this latently universal disease depends, according to Prof. Rindfleisch, on good food and a free blood-formation. These failing, tuberculosis becomes evident, and is then handed down by inheritance. The disease shows itself in a characteristic inflammatory process, under which Prof. Rindfleisch reckons (1) disseminated miliary tuberculosis, the result of the tubercular poison alone, appearing in the form of miliary and submiliary nodules in most of the organs of the body; (2), the more localized miliary tuberculosis, where, in consequence of some local mechanical irritation, the disease appears only in a single organ (lung, brain, peritoneum); (3), localized miliary tuberculosis, where miliary tubercles are developed in the neighborhood of an inflamed centre, ultimately finding their way into the inflamed tissue itself; and (4), inflammatory processes, especially ulcerations of chronic course, with little, or perhaps no, local formation of miliary tubercles, but very generally with tuberculosis of lymphatic glands. These inflammations, Prof. Rindfleisch points out, occur from causes which, in ordinary circumstances, would scarcely produce a passing congestion. The inflammatory product consists, in the first place, in a slow growing deposition of white blood-cells in the connective tissue of the irritated parts. After a time, changes occur. 1. Part of the cells take an epithelioid character, and are termed tubercle-cells, being three to five times as large as white blood-cells. 2. Giant-cells are developed, which, however, are not to be regarded as characteristic of tubercle. 3. After the aggregations of epithelial cells have produced certain centres in the new growth, there appears a fine granular albuminous substance, either coagulated lymph, or developing zöoglœa masses, which either separates, or involves in it the epithelial cells. 4. Lastly comes caseation of the inflammatory products owing to defective nutrition. These various peculiarities of the inflammation appear in the different forms of tuberculosis enumerated above.—*London Med. Record*, Feb., 1882.

THE POSITION OF THE OVARIES.—Prof. HIS contributes a new paper (*Arch. f. Anat. u. Entwick.*, 1881, 4 and 5) to the rapidly increasing literature of this vexed question. He holds, in the main, to his theory that they lie with one side resting against the wall of the true pelvis and that the long axis is verticle, a view which appears to have gained ground since its publication in 1878. He has since very carefully examined the position of these organs in three suicides aged respectively fifteen, sixteen, and twenty years, and finds, as indeed might have been expected, that if the fundus of the uterus is on one side of the median line the ovary of the opposite side is drawn downwards and into an oblique position. It is evident that after this position has once been reached the weight of the viscera will tend to press the ovary more and more from its normal position. Summing up the results of all his observations His gives the following as the normal or primary position of the ovary in the young adult female: The organ lies with its side against the wall of the pelvis, the free border being behind and the attached end below. The Fallopian tube is looped over the ovary, rising along the front and falling behind it. The fimbriæ then turn back and spread over the summit of the ovary.

It should be remembered that with advancing years and after repeated pregnancies the situation of the ovary must become more and more uncertain.—*Boston Med. and Surg. Journ.*, March 9, 1882.

TREATMENT OF SCIATICA BY HYPODERMIC INJECTIONS OF NITRATE OF SILVER.—Dr. GRESLON reports (*La France Méd.*, Sept. 26, 1881) the radical cure of a case of sciatica, which had resisted all ordinary methods of treatment by hypodermic injections of the nitrate of silver. The patient, a lady fifty-three years of age, was of a gouty and rheumatic diathesis. She had recently suffered from several attacks of acute articular rheumatism. Her metacarpo-phalangeal articulations presented the characteristic deformities of arthritis deformans. In March, 1879, the patient was attacked by sciatica in the left thigh and leg. The most severe pain

was experienced in the calf and at the sacro-sciatic foramen. After unsuccessfully treating the case for twelve days with sinapisms, vesicatories, and anodynes, Dr. Greslon injected five drops of a twenty-five per cent. solution of nitrate of silver into the deeper tissues of the calf, at the most painful part. The injection was attended by violent pain, and followed by the formation of an abscess, which was opened at the end of a week. A few days later, the neuralgic pains had completely ceased in the leg. Eight drops of the same solution were then injected over the sacro-sciatic foramen. No abscess ensued, but an inflammatory exudation occurred, and discharged, six days after the puncture, some sero-sanguinolent matter. A week later all pain had disappeared from the limb. The patient has had no relapse of the sciatica.—*London Med. Record*, Feb., 1882.

The Possibility of Distinguishing Human Blood from that of the other Mammals.—From a careful study of the comparative sizes of the blood-cells of different animals, and their behavior with different reagents, M. Vibert believes that it is impossible to say positively that a spot is formed by human blood; probability only can be ventured on. Occasionally it may be stated that the blood is from other than man, but only when the blood making the spot is from an animal having much smaller cells than man.—*Journ. de Méd. de Paris*, Feb. 18, 1882.

Treatment of Diphtheritic Conjunctivitis.—Guided by the success obtained by Prof. Bose in the treatment of diphtheria of the throat and of wounds, by means of a four per cent. solution of salicylic acid in glycerine, Vossius employed the same application in a bad case of conjunctival diphtheria, and with unexpectedly good results (*Klin. Monats. für Augenheilk.*, November, 1881). Applications of ice and frequent cleansings with solutions of carbolic, boracic, and salicylic acids, had been used without benefit. There were great chemosis and swelling of the lids, with extensive ulceration of the cornea. The glycerine solution of salicylic acid was painted every half hour upon the conjunctiva; improvement commenced at once, the swelling subsided, and the corneal ulceration healed. The eye recovered completely from what had been, to all appearance, an almost hopeless condition. It was noticeable that the stage of purulent discharge, through which such cases commonly pass, was absent in this instance, and that the very extensive and dangerous ulcer of the cornea healed without leaving any scar sufficient to cause impairment of vision. The patient was a little girl aged two years; the diphtheria affected the fauces in the first instance, the eyes later.—*London Med. Record*, Feb., 1882.

Polyuria in Convalescence from Typhoid Fever.—Dr. Spitz, from the observations of several instances of polyuria occurring in the convalescence of typhoid fever, concludes that polyuria occurs in about fifty per cent. of the cases of typhoid fever, ordinarily at the close, and may last until the sixth week, but it also occurs when any marked febrile intermission is produced artificially. He has found no organic cause of the increase of urinary secretion.—*Deutsche Med. Woch.*, Feb. 18, 1882.

Tartar-Emetic in Chorea.—Malherbe, of Nantes, has published, in the *Journ. de Méd. de l' Ouest*, a paper tending to show that, notwithstanding the satisfactory results obtained by certain new remedies in chorea, tartar-emetic should retain an important place in the treatment of that disease. Emetic doses are quite sufficient. Thus administered, tartar-emetic produces its effects, especially in cases where the choreic spasm attains a high degree of intensity; and, if it do not always definitely cure, at least for a certain time it removes the danger. M. Malherbe recommends the simultaneous employment of large doses of morphia, either by the mouth or by hypodermic injection. For example, 10 or 15 centigrammes (1½ to 2¼ grains) of tartar-emetic should be given in the morning, and in the evening from two to four teaspoonfuls of syrup of morphia, or one, two, or three centigrammes of this substance in injection. This treatment was employed upon a girl, aged twenty-three years, who had been affected with chorea for two years, and who came into the hospital with a severe recrudescence of all the symptoms, accompanied also by hysterical manifestations. An emetic draught of 15 centigrammes of tartar-emetic was prescribed, in the first instance, to be taken every five minutes; also a hypodermic injection of one centigramme of hydrochlorate of morphia, and an enema with four grains of bromide of potassium. The vomiting was copious; the second morning, the choreic movements had greatly diminished. The treatment was repeated two days afterwards, then at variable intervals; and the same improvement always occurred. The patient left the hospital, not cured, for her chorea seemed to become chronic, but much improved. M. Malherbe quotes this case, because it clearly shows the powerful action of tartar-emetic on the choreic spasms. It was never necessary to administer the medicine for several days in succession. He also quotes the case of a young girl, in whom, notwithstanding the means employed, the disorder of the muscles had arrived at such a stage of violence, that he had given directions to have a wadded case made to preserve the patient from the danger of external concussions. Two emetic doses of tartar-emetic, given at forty-eight hours' interval, assisted by large doses of morphia, seemed to have no effect; while, after a third emetic, a considerable soothing took place, and at the end of three days, all choreic movement had disappeared.—*London Med. Record*, Feb., 1882.

Another Danger from the use of Iodoform.—In the *Deutsche Med. Woch.*, February 18, 1882, Dr. Aschenbrandt gives an illustration of another danger attending the use of iodoform: that is, its liability to produce extensive pneumonia by its irritant action on the pulmonary surfaces. He gives three cases where extensive and fatal pneumonia was produced in cats by the use of iodoform applied as dressings to wounds in the neck, and one case when pneumonia was also caused by causing a cat to inhale for an hour iodoform vapor mixed with air.

Symphyseotomy.—Dr. Morisani gives statistics of fifty cases, in which symphyseotomy has been performed at Naples on 48 women. In two cases, the operation was performed twice on the same subject. Of these, 40 mothers survived, 10 died; 41 children survived, 9 died. Sometimes the operation had been performed some time after the beginning of labor, and in several cases the child had been treated to other different manœuvres and operations before the operation of dividing the symphysis pubis was resorted to. The diameters of the pelvis varied. In 12 cases the conjugate was 81 millimetres; in 16 it was 74 millimetres; in 7 it was 69 millimetres; in 13 it was 67 millimetres; and in 2 cases it measured only 61 millimetres; but these were exceptional cases. The operation thus ranged between 81 millimetres and 67 millimetres. The only operation, in the opinion of Dr. Morisani, which competes with symphyseotomy, is embryotomy. Tibone lost 21 mothers out of 100 after embryotomy. Chiara lost 24 mothers in 100 such cases. He compares these figures with 10 deaths out of 50 cases of symphyseotomy, and remarks

that the mortality among the mothers is less, and that, whilst by embryotomy all the children were destroyed, 41 out of 50 fœtal lives were saved by the division of the symphysis. The method resorted to by Morisani, in performing symphyseotomy, is as follows: A small, crotchet-shaped, blunt-pointed knife, curved, and cutting on its concaved edge, is used. It is known as the *falcetta di Galbiati*. An incision of from 3 to 5 centimetres is made just above the symphysis pubis. The articulation is gradually reached, the *falcetta* is slipped along the posterior surface of the symphysis, and, once the lower edge of the symphysis is reached, the cutting concavity of the instrument is hooked under the interpubic cartilage, which is then cut through from below upwards. If the uterine contractions are strong, the expulsion of the child is then allowed to take place spontaneously. If they are feeble, or the head does not descend, the forceps is applied. Lastly, the wound is dressed, and immobility of the pelvis secured by an appropriate bandage. The operation of symphyseotomy has been performed in the obstetric clinic and maternity ward of the hospital for incurables at Naples. The period traversed is from 1868 to the end of December, 1880. The chief operators were Novi, Martini, and Morisani.—*London Med. Record*, Feb., 1882.

RESECTION OF THE UPPER JAW.—At a recent meeting of the Société de Chirurgie of Paris, M. POLAILLON read a report of a work by M. COLOMBAT, of Marseilles, on this subject. The author is of the opinion that tracheotomy and ligature of the carotid may be dispensed with, and favors the internal incision either alone or combined with the external. For dividing the bone the cutting forceps are recommended, and the author only employs the chain-saw when there is great resistance; he insists upon the favorable character of the prognosis. In order to avoid suppuration of the eye, he proposed to suture the eyelids together until the floor of the orbit has been replaced by cicatricial tissue.—*Revue de Thérapeutique*, Feb. 15, 1882.

A BULLET THAT HAD LODGED IN THE HEAD FOUND TEN YEARS AFTERWARDS IN THE LARYNX.—Dr. FAUVEL contributes the following curious case (*Revue Mens. de Laryngol.*, Oct., 1881.) The patient, ten years before, had received a gunshot wound under the left eye; and medical opinion was divided as to whether the bullet had remained in the head or not. For three months, pus and small pieces of bone were discharged through the mouth. The man had since suffered, at frequent intervals, from acute pain in the head and jaws, and his general health was impaired. Seven months ago, he first felt pain in the throat, and in the jaw near the temporo-maxillary articulation and left ear, with pricking sensations, which he compared to a needle plunged in the ear. Later on, the same pricking sensation and pain were felt in the left side of the larynx. There were expectoration of blood, cough, hoarseness, trouble in swallowing, and finally aphonia. Liquids could scarcely pass. At this crisis laryngoscopic examination was made, and a dark, irregular, lobulated, fungating-looking mass was discovered, filling up the left half of the glottis and concealing the greater part of the left vocal cord. The other parts of the throat were normal. The tumor most resembled a melanotic growth; but, in consideration of the rarity of such growths in this situation, it was thought rather that the patient was suffering from the ulcerative stage of laryngeal phthisis. But afterwards, as the tumor increased in size, and seemed very firm and resisting to the touch, it was diagnosed as osteoma, and its extraction decided on. Attempts that were made to remove it were not at first successful. The patient passed the night in coughing and vomiting; and, during a fit more violent than the rest, expelled a heavy, hard body, which proved to be a bullet. From this date the patient recovered his voice, and all pain and trouble in swallowing disappeared. Nothing could be seen of the tumor, except the slight scar where the bullet had passed through. On rhinoscopic examination, some small perforations in the upper part of the naso-pharynx were discovered. Dr. Fauvel, after remarking upon the difficulty attaching to the diagnosis of this case, says that it is equally difficult to explain the manner in which the ball passed downwards into the larynx. He suggests that, having entered apparently below the malar bone, the bullet penetrated obliquely between the ascending ramus of the inferior maxillary and the superior maxillary bone, and became lodged in the basilar process of the occipital bone, in front of the vertebral column, and behind the pharyngeal aponeurosis. The ball, instead of becoming encysted, was probably set free by the surrounding bone becoming necrosed, which would account for the discharge of the pus and spiculæ of bone, and the perforations in the naso-pharynx afterwards seen by the rhinoscope. Yielding to the force of gravity, it then slowly descended in front and to the left of the vertebral column, being concealed from view, first, by the veil of the palate, and afterwards by the posterior pillars of the fauces. When it reached the base of the tongue, it changed its direction, and, passing forwards and downwards, became lodged in the left ary-epiglottidean fold.—*London Med. Record*, Feb., 1882.

IODOFORM POISONING.—From a careful study of the mode of production of symptoms of poisoning by the use of iodoform, Dr. ANTON BUM concludes:

1. That iodoform becomes poisonous when iodine remains uncombined in the system.
2. This can occur either when iodoform is given in excess, or when there exists a qualitative or quantitative change in the blood, and especially when both conditions exist together.
3. Therefore, large quantities, or the repeated use of small amounts, of iodoform are to be avoided, especially in anæmic or very young or old individuals.
4. The iodoform dressing should be changed as seldom as possible, so as to avoid cumulative action.
5. Since absorption is, without doubt, accelerated by pressure, the dressings should never be tightly applied.—*Wiener Med. Presse*, Feb. 19, 1882.

A CORRECTANT OF THE ODOR OF IODOFORM.—OTTO RUETZ (*Pharm. Zeitung*, No. 94) finds the substance best adapted for diminishing or concealing the disagreeable odor of iodoform to be the oil of thyme, to which a little thymol may be advantageously added. It is preferable to oil of peppermint, oil of bitter almond, etc., and, as an example, it is stated that for a solution of from one to two grammes of iodoform in thirty grammes of collodion, the addition of one decigram thymol is sufficient.—*Amer. Journ. of Pharm.*, March, 1882.

ERGOTINE IN PHARYNGITIS.—*La Revue Mens. de Laryngol.* points out a therapeutic method which is capable of giving good results in chronic pharyngitis with exaggerated development of the veins of the pharynx and muco-purulent secretion. The following lotion should be profusely applied, twice a day, over the pharynx by means of a camel's-hair pencil: Ergotine, 15 grains; tincture of iodine, 1 drachm; glycerine, 1 ounce.—*London Med. Record*, Feb., 1882.

DIABETES INSIPIDUS.—In the *Canada Medical Record* for February, 1882, Dr. C. A. WOOD reports two cases of diabetes insipidus, one of which was cured by ergot, and the other recovered without other than hygienic treatment.

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PERITONEAL TRANSFUSION.

THREE years ago Ponfick proposed (*Berliner klin. Wochenschrift*, 39, 1879), to substitute for the ordinary mode of transfusion—peritoneal transfusion—which consists in injecting defibrinated blood not into the vessels directly, but into the peritoneum. The operative procedure employed by Ponfick is simple: it consists of a glass funnel, having a rubber tube terminating in a cannula, attached. The blood, defibrinated, is poured into the funnel—the cannula having been attached after transfixing the walls of the abdomen in the usual way, with the trocar—and is allowed to flow into the cavity. Both the blood and the apparatus must be warmed to the temperature of the body. The quantity of blood poured into the cavity at a time is from six to eight ounces. When the transfer of blood is completed, the cannula is withdrawn, and a bit of adhesive plaster put over the wound. Ponfick has not observed any appreciable ill result from this operation. The advantage which he attributes to it, is the slow absorption of the blood, whence the patient is preserved from acute cerebral, pulmonary, or cardiac congestion.

Soon after Ponfick had published an account of his new method, Bizzozero and Golgi, two eminent Italian physicians, undertook calorimetric observations, at the time when the blood was injected into the peritoneum. They studied, also, the influence that the act of injection exercised over the globular richness and the quantity of hæmoglobin in the blood, of the individual transfused. These researches were made on rabbits. To demonstrate the globules, the experimenters used the chromocytometer of Bizzozero. They ascertained that the blood injected into the abdominal cavity is absorbed with great rapidity; in twenty minutes after the injection, the richness of the blood in hæmoglobin is increased. This increase attains its maximum thirty to forty hours after the injection. The effect persists for twenty-seven days. It was much more rapidly produced in those animals who had suffered the loss of some blood by phlebotomy.

Notwithstanding the results of these researches are decidedly in favor of the peritoneal transfusion, the practice of Ponfick has not had thus far many imitators. There have been published three cases in which peritoneal transfusion has been performed in man, and one of these is adverse to this innovation. Two of the cases were reported by Golgi and Raggi. In one of these, the two physicians injected about ten ounces of defibrinated blood into the peritoneal cavity of a cachectic dement. Not only did the transfusion improve the physical condition of the patient, but also ameliorated his mental state. In fifteen days the richness of the blood in hæmoglobin rose from 35.8, where it was before transfusion, up to 57.9. Encouraged by this first success, Golgi and Raggi had recourse to peritoneal transfusion in an insane man who had an obstinate diarrhœa. They threw into the peritoneal cavity about eight ounces of defibrinated blood, taken from a young and robust man. An improvement was almost immediately produced in the general state. After some hours the skin and mucous membrane were more colored, and the patient, who had been on his bed for six months, was able to rise without assistance. His digestive functions assumed a better state.

The third case, reported by Prof. Mosler, of Greifswald, goes to show that peritoneal transfusion has its dangers, consisting in an inflammation of the peritoneum. Mosler (*Deut. Archiv. für klin. Woch.*, vol. xxviii., p. 476), proposed to himself to study the effects of repeated peritoneal transfusion. The first case on whom he tried the method of Ponfick, was a young man of twenty-seven years of age, affected with splenic leucocythemia. This patient had submitted without inconvenience to sixteen injections of Fowler's solution, thrown into the parenchyma of the spleen, which had lessened in size under the influence of this medication. The extreme degree of anæmia in which he found the patient, appeared to Mosler a pressing indication for transfusion. He decided to perform peritoneal transfusion. On the 8th of December, he introduced into the cavity, properly disinfected, about one ounce of defibrinated blood. After removing the cannula, he applied an antiseptic dressing, and over it, a vessel of ice. To further insure against the occurrence of peritonitis, he administered some extract of opium morning and evening. The patient suffered little pain, and neither blood, nor urine, underwent any appreciable modification. On the 21st of December, he transfused, progressively, about

four ounces of defibrinated blood. The cannula was inserted in the linea alba, about two and a half inches below the umbilicus. A slight elevation of temperature was then noted, and during the night, the patient complained of increased pain at the place of puncture. In the morning, the internal temperature was 103.2° Fahr., and the pulse 128 to the minute, and there were present all the signs of peritonitis. The action of the heart became irregular, and a violent dyspnœa came on. The patient died in the night of the 25th of December, four days after the injection. At the autopsy a diffused peritonitis, an enormous spleen, and a liver presenting the evidences of syphilitic hepatitis, were found. The precautions taken by the operator prevented any mishap, and peritonitis, hence, was not a result of the operative procedure. The blood, of human source, and healthy, had been defibrinated with great care; the intestines had not been wounded. The result seemed by Mosler to be due to the repetition of the transfusion. It would, hence, appear that the contact of the serous membrane, with a liquid coming from without, excites an irritation which may pass into an inflammation if several times repeated.

We may, therefore, conclude with Mosler, that peritoneal transfusion, when repeated at short intervals, constitutes a dangerous method of medication, and is contra-indicated when visceral lesions dispose to peritonitis. Transfusion is at best but a palliative. It is very useful after acute hæmorrhages, to furnish to the hæmatopoietic organs, remaining sound, the stimulant necessary for the maintenance of their functions. In cachectic subjects, suffering from an incurable affection, all kinds of transfusion are not only useless, but also more or less dangerous.

The ill-success of peritoneal transfusion in Mosler's case, is so plainly attributable to the bad condition of the patient, and to the repetition of the operation, that it cannot justly be alleged against the new procedure. The points in its favor are the facility with which the operation may be performed, and the promptness with which the transfused blood is utilized in the performance of the hæmatopoietic functions. If it be shown in the future that peritonitis does not result from it in proper subjects, the method of peritoneal transfusion ought to be employed by preference in all cases requiring the substitution of blood.

In this connection, it may be well to quote the conclusions of MM. Bizzozero and Golgi:

1. There can be no doubt that blood injected into the peritoneum unites with the general mass of the blood. This fact is demonstrated by a comparative examination of the richness of the blood in hæmoglobin before and after the operation.

2. The period during which, following the injection, it determines a progressive increase in the hæmoglobin, is comprised between an hour and a half and forty-eight hours.

3. The artificial increase of hæmoglobin is, within certain limits, proportional to the quantity of blood injected.

4. Differences are observed in the mode in which the increase of hæmoglobin is produced, according as the animals are normal, or have been blooded previously.

5. The direct, microscopical examination of the blood of the transfused animal, proves that there is nothing abnormal in the form, size, appearance, or agglomeration of the globules.

PLASTER OF PARIS AS A MATERIAL FOR SPLINTS.

THE wide-spread employment lately of plaster for jackets in spinal deformity, has made the profession familiar to a large extent with its properties and its usefulness as a dressing. But, absorbed in its local application, we are apt to forget that it has a much wider field than a single disease. Though long since brought to the attention of the profession, we are persuaded that its use is not as general as it ought to be, especially as a splint in many fractures and in diseases of the joints, and particularly among practitioners in the country. A splint, in a case of fracture, is of course a temporary means to hold the fragments of bone in place until Nature can apply *her* splint—the provisional callus—itself in turn a temporary splint, which she strives to remove as soon as the bones are definitively united. The chief trouble with our splints is that they do not hold the bones absolutely at rest. No wooden, or pasteboard, or wire, or leather splint applied by bandages does this completely, and moreover the padding is at least apt to be too thick in one place or too thin in another, and so press unequally by reason of the absence of exact adaptation to the contour of the limb. Again, if other materials, such as starch, silicate of soda, dextrin, albumen, etc., be employed, the trouble is that the fragments have every chance to become displaced during the long period of solidification. If, however, plaster be used, and especially if an anæsthetic be given, as ought to be done in the majority of cases, the fracture may be accurately reduced, the plaster dressings be applied, and continous extension be maintained without any difficulty until the plaster has set, and the well-adjusted fragments are retained almost entirely at rest in the proper position.

That it has disadvantages goes without saying, for what method or appliance is perfect? It is untidy in its application, but extra need of soap and water is not to be pitted against any advantage to the patient. That it is somewhat heavy is true, but it is often made needlessly so; and where it is desirable to avoid weight, it can be divided longitudinally, sprung off the limb, and an exact repro-

duction in some lighter material, such as felt, can be obtained. The resiliency of plaster is scarcely appreciated. The edges of a plaster jacket can be as readily sprung apart, and the jacket be removed without breaking, even from the trunk, as if it were of leather. It is urged, also, that it prevents evaporation; but this is a total error, save when it be varnished, which ought never to be done. Not the least of its advantages is the equable pressure it exerts if applied at once in fracture. Many practitioners, we know, are afraid of precisely this pressure on an injured part rendered inaccessible by a plaster splint. But *experientia docet*—"experience does it"—and a few fair trials we think will convince the doubter. Clearly, too, from what we have already said, the part is not inaccessible, for the bandage may be divided and reapplied by a dry outer bandage as often as desired, or it may be applied in pieces as real splints. Moreover, the foot or hand, with the presence or absence of pain, will usually be an excellent guide as to the condition of the injured limb.

In compound fractures, though less generally useful than in simple, it still finds its place. It may be used only as a posterior splint, or if it completely surrounds the limb a window must be cut over the site of the external wound, and the margins suitably padded with tow or cotton, or other material. Or a box may be applied over the fracture and the bandage applied all around the box, which on removal will leave the wound accessible. It will thus be found an invaluable means of adjustment in many such cases.

In bruises, sprains, and similar injuries, and in diseases of the joints in which absolute rest and, it may be, equable pressure are required, it will be found invaluable either for a prolonged application or for temporary use as a means of obtaining its counterpart in felt or other like material.

Its application is most commonly made by ordinary roller bandages. These should be of cheese-cloth or any similar material, with loose meshes, as loose as the finer mosquito-netting. The plaster may be rubbed into the bandage, or the bandage be passed through the plaster in a long envelope-box by slits at each end. The bandages, of suitable width and length, loosely rolled, and made with the best and finest plaster, should be kept in a pasteboard or, better, in a tin box, to keep out the moisture, and after being placed end up in a basin of water for a couple of minutes, are ready for use. Before the first plaster bandage is applied the limb should be protected either by a dry bandage or by a sheet of cotton wadding. The Bavarian method will be found described in most modern text-books. If separate splints be desired, and they are rapidly and deservedly growing in favor, they may be made of two or three duplicate layers of flannel of a suitable size and shape, only the outer one or two being soaked in the plaster, the inner serving as a soft padding. An outside bandage coapts and retains the whole in place, and allows of its ready removal either partially or wholly.

In *The Medical News and Abstract* for last February we gave a short account of a substitute for plaster called Tripolith, which is said to be lighter and cheaper than plaster, to set more quickly, and, after it has once set, it may be softened with water and readjusted, and will then again become rigid, thus fitting it peculiarly for surgical use. But we do not know that any one in this country has yet tried it. If so, we should be glad to learn with what success.

PUBLIC VACCINATION.

It is very hard to convince the average councilman or alderman as to what is the object of public, gratuitous vaccination. Boards of Health, when applying to the civic authorities for funds to carry on the work of public vaccination, are constantly met with the objection that many will avail themselves of the privilege who are well able to pay for it. Many physicians also confound the object of public vaccination with that of those pernicious examples of charity run mad, modern dispensaries, and contend that by free vaccination they are deprived of a part of their living. So strong and influential is this feeling, that, as was announced in our columns a few weeks since, Cincinnati gave up, or at least rigidly restricted, free vaccination, on account of the number of well-to-do persons who presented themselves to the public vaccinators.

In reality free vaccination stands upon an entirely different plane from other public or gratuitous medical relief, for while the individual benefits by it, the aim is prophylactic and for the general good, quite as much as any other procedure of State medicine, such as steps taken to prevent an epidemic of yellow fever or cholera.

Few educated physicians doubt that could vaccination and revaccination be rigidly enforced by a compulsory law, small-pox would well-nigh disappear, but in view of the fact that such legislation seems to be opposed to the genius of our American usages, and appears (for it is only in appearance) to restrain the liberty of the citizens, free vaccination offers the best substitute which has yet been devised.

In Philadelphia, and we believe, also, in New York and Boston, the vaccine physicians are stimulated to vaccinate all that apply, or that will submit to the operation, without reference to social standing or financial ability, it being held that the greater the number of properly done vaccinations and revaccinations, the smaller will be the number of cases

of variolous disease. It is a penny-wise policy which seeks to diminish the drain upon the public treasury by limiting the amount of vaccination done at its cost. The expenses attendant upon the existence of small-pox exceed any vaccination appropriation, far beyond the power of statisticians to estimate, and the municipal authorities should do all that is possible to increase the number of vaccinations.

The object aimed at is the good of the greatest number, irrespective of individual benefit. There is no other prophylactic measure of any avail, and all other sanitary measures are utterly futile.

Demosthenes said that the secret of oratory lay in Action! Action!! Action!!! So to prevent small-pox the remedy is Vaccinate! Vaccinate!! Vaccinate!!! and whether the operation is paid for by the public or not, is of small matter, if only thereby the number of properly performed vaccinations can be increased.

FANATICISM AND SENSUALITY.

IN view of the renewed agitation concerning the Mormon question, we have been interested in reading an editorial note in the *British Medical Journal* for January 28, on the subject of "Religiosity and Animalism," by which is meant the association of sexual excess, not with religion, but with the perverted or exaggerated religious ardor usually known as fanaticism. That there is, apparently, some such relation is a fact observed and recorded as long ago as 1800, as shown in the editorial above mentioned by a quotation from Robertson's *Charles V.*, which attributes to sensual gratification and to extremes of enthusiasm a similarity of constitutional cause. In our own day Mr. Spurgeon is reported to have called attention to the "strange but certain law" by which "excess of spirituality is placed next door to sensuality."

Isolated cases, apparently confirmatory of this assertion, are of frequent occurrence; indeed, some of them in this country have been topics of wide-spread interest. In Mormonism, however, we see its workings as manifested in a large body of weak-minded and misled individuals, whose unbalanced and uncertain mental processes have been dominated by a few unscrupulous demagogues, and directed into the channel towards which by this law they would at any rate naturally tend.

That there is among the masses who make up the Mormon community a substratum of intense though irrational religious fervor and an ardent belief in the teachings of their prophets, no one can for a moment doubt after having seen their vast Tabernacle packed with a congregation who were moved to tears, to laughter, to enthusiasm, or, most searching of all tests, to generous subscription, by the exhortations of Brigham Young and his associates.

When, however, from powerful or protracted mental strain and exaltation in persons of naturally weak cerebral faculties, the higher functions of the brain become inoperative, self-control is weakened, and reflection and judgment perverted, it is hardly to be regarded as a mystery that the most powerful of the lower impulses should take that opportunity of asserting itself; and it is, therefore, not to be wondered at that "there is, and always has been, an undoubted coexistence of religiosity and animalism."

Among recent examples of the association of erotic tendencies with real or assumed pietistic excesses, which are a parody on true Christianity, Guiteau furnishes the most conspicuous instance. A lecturer on the second coming of Christ, the author of a companion to the Bible, and a would-be religious exhorter and revivalist, he at the same time held the most promiscuous associations with women. Hereditary influences in this direction were not wanting, as his father is said to have been "a religious fanatic devoted to free-love socialistic teachings for the last thirty years of his life." Dr. Folsom, of Boston, in an article on the responsibility of Guiteau, in the *American Law Review* for February, states that "he always assumed the character of an excessive religionist, without any real reverence or true morality, while his relations with women were so impure that he contracted disease thereby more than once, and his ordinary pious talk often seemed like the worst blasphemy." Other sexual aberrations of a still more noticeable character were attributed to him during his late trial and were not denied.

To determine just where such a state passes into legal insanity is a problem of great complexity; but that the two conditions are akin, and are in his case, as in others, associated with a deficiency or disturbance of mental balance, can hardly be questioned.

HOW THE PROFESSION IS USED TO BE ABUSED.

PHYSICIANS have themselves to thank, sometimes, for an apparent lack of consideration exhibited towards the profession. They allow themselves to be used to forward the purposes and schemes of individuals and corporations. Does a company own a barren waste of wilderness, they purpose to convert it into a health resort, and with that view arrange an excursion of physicians, who, after a dinner at the proposed resort, are expected to organize a meeting, and give utterance to their enthusiastic opinion of the extraordinary salubrity and climatic advantages of the new place. Does a company, or a clique of political operators, propose a new water-supply, the physicians of the city or town are gradually worked up, resolutions are introduced into the principal medical society, and the water scheme is thus effectively supported. Does a hotel keeper open a

new seaside hotel, he contrives to induce a number of physicians to go to his place, to eat a dinner, and then to praise the healthful situation of the hotel, its sanitary arrangements, and especially the admirable provisions for water-supply and for drainage. In these, and in numerous other ways, the medical profession is made use of, its independence and dignity of conduct lowered, and its honesty of purpose impugned. The people who profit by the unsuspicious good nature of physicians secretly laugh over it, and are to be found in any real question of importance to the medical profession, combined against them. If men wish to bring forward a wilderness as a health resort, or a new water-supply, or to publish the healthfulness of a new hotel, they ought to pay for a proper sanitary survey. Not to speak of the loss of dignity, the dinner they give, and a free railroad ride, is rather poor compensation for the opinions of a number of physicians. When the place, or the scheme, has been properly advertised, physicians will find that they are no longer required.

PEPPERMINT, VALERIAN, CATS, AND SEWER GAS.

The above *olla podrida* was tried in Hoboken lately. A woman, suspecting that a leak in the pipes was the source of a sewer-gas smell, and having appealed in vain to the owner, tried the excellent plan of pouring some oil of peppermint into the third-story wash-basin. The odor appearing in the parlor, pointed to a leak behind the parlor closet. This experiment failing to convince the landlord, she next tried a similar experiment with valerian, and then let loose two enterprising cats, whose search for the source of the to them delightful odor, led them to the same closet as before. The still incredulous landlord was, however, finally persuaded to investigate the plumbing, and found that the cats were right; the pipes leaked badly. We commend this new and valuable use for the cat to Mr. Bergh, as a more rational vent for his enthusiasm than his crusade against vaccination and vivisection.

When criminals are acquitted on the plea of lunacy, surely they ought to be securely confined, lest they escape to perpetrate additional crimes. Very evidently, "stone-walls do not a prison make" in Harrisburg. Laros, the Easton prisoner, was sent to the Harrisburg Insane Asylum in 1876, from which, in six years, he has escaped three several times. Luckily, his worst offence while at large has been—marriage! He has not poisoned any one else, but it is no thanks to the easy guardians of the Harrisburg Insane Asylum. We trust they will look to their gates and walls hereafter, lest a second and worse crime follow the first.

REVIEWS.

Home and Climatic Treatment of Pulmonary Consumption on the Basis of Modern Doctrines. By J. Hilgard Tyndale, M.D., etc. pp. 174. New York: Bermingham & Co., 1882.

Our author has a big contract, but he undertakes it confidently. "The future path to be pursued in therapeutics of consumption," he says, "is to endeavor to bring nutrition to the highest point attainable, and retain it there long enough to enable us to pursue a systematic course of antiseptic treatment of the general condition, laboring under chronic septicæmia, as well as of the local lesion. Such a system, carefully planned in all its details, I have been carrying out for some time. As yet my statistics are in their infancy, but as the system is carefully elaborated and founded on a rational basis, I feel confident of the future."

A diligent search through the book has failed to disclose this system. He treats of the home and climatic management of consumption in a series of letters to a friend, "in greater part," the therapeutical part being preceded by a chapter on the pathology of consumption. This is his definition of pulmonary phthisis: "It stands as the collective expression, the highest potency of a number of more or less chronic inflammatory processes of the lung, which, having failed of restitution to the normal condition at an early period, lead in their further course to proliferation and shrinkage of connective tissue with or without pigmentation and bronchiectasis, to calcification or to progressive destruction of their cheesily degenerated infiltration, and the formation and rapid dissemination of tubercle, either independently or in connection with the preceding conditions."

Such is a fair sample of his style—stilted, inaccurate, confusing, and pretentious. A favorite word is "factor," which he is never tired of repeating. "The chief factor in correct comprehension and successful treatment is the individual capacity for giving to each of the three factors of therapeutic conclusion: Fixed laws, empiricism, and hypothesis, their due in each case." He speaks of "meteorological factors," of "terrestrial factors," we suppose because he does not consider meteorology as a terrestrial subject, and of "nature's factors;" "artificial factors;" "ideal factors," etc.

The author appears to be a specialist who has never been a physician. For constipation he advises from one-fourth to one-half a grain of podophyllin, by which he probably means the resin, $\frac{1}{80}$ of a grain of atropia, and two grains of aloes in a pill at night (p. 43). As an expectorant he prescribes, benzoic acid, gr. v., and sulph. aurat, gr. i. (sic.) every three hours (p. 84). For night sweats he advises, $\frac{1}{80}$ grain of atropia subcutaneously at bedtime. Amongst other remarkable recommendations, we select the following:

The question of washing for cleanliness "is one in which the physician must strictly individualize." He recommends in italics, that "*every female consumptive should be carefully examined as to the condition of her genital organs.*" He informs us that "*the function of the lung is the effect of the labor of other organs.*"

The type and paper of the book are good, but the text is disfigured by numerous misprints. There is a good deal of information in the book, but very badly expressed, and often so put as to be very misleading. The author refers to another book, "my forthcoming publication, *Present Status of the Pathology of Pulmonary Consumption.*" The quotations given of his pathological views from the present book afford us indications of the choreic jactitations, and the ataxic confusion of wording in which he, no doubt, indulges.

These are books to impress consumptives with the notion that a new specialist of wonderful endowments has appeared above the horizon of the universe. This new prophet is to cure them all, also, for has he not some newly-developed "system" of treatment?

OPIUM-SMOKING IN AMERICA AND CHINA, ETC. By H. H. KANE, M.D. pp. 156. New York: G. P. Putnam's Sons, 1882.

In the preface the author gives an account of the sources of his information regarding opium-smoking in this country. Some of the smokers came to his "Home," and two of his male nurses smoked to permit him to observe the symptoms produced. "Finally," he says, "I smoked myself a number of times, both in large and small amounts, and often to decided excess, so that I might be the better able to fully understand the subjective symptoms." Amongst the persons from whom he acknowledges the receipt of information are "Mr. Tom Lee, Chinese deputy sheriff; Ah Sing, keeper of a 'joint' in Mott Street; Senator Jones, of Nevada, and Dr. William Simpson," etc.—a curious collection.

Opium-smoking began in California, in 1868, and has since been carried on in various cities. He says that to-day there are many places for smoking, and three hundred smokers in New York. But few towns, now, he thinks, are unprovided with "opium joints," the establishments where this practice is carried on. Dr. Kane has himself done much to popularize the practice. Through his sensational articles, illustrated by cuts of pipes and other "smokers' necessaries," in Harper's and Scribner's Magazines, and elsewhere, Dr. Kane has contrived to familiarize many people with the subject. As he has a "Home" for the treatment of the opium habit, he dutifully provides a remedy for the evil which he may indirectly create. Indeed, he has constructed a "joint" in his own house, "where I had every facility, having purchased a full 'lay out,' and had a Chinese bunk erected in my office" (p. 51). At first smoking produces pleasurable excitement, but after some months the habit is kept up merely to relieve the unfortunate victim of the horrible sensations produced by the want of it. There is no difference in the effect of opium, whether taken by the stomach, subcutaneously, or in smoke, except in the rate with which the effects are produced. In smoking, the action seems to be intermediate between the stomachial and subcutaneous administration. But smoking is wasteful. The ash contains a portion of the alkaloids. The habit is not less not more hurtful than the use of opium in other ways, and moderate indulgence may not necessarily do any mischief of consequence. But our author has a "Home," and he treats cases successfully. A very hard case "was in the De Quincey Home just four days, and under treatment but ten. He was broken of his habit thus speedily and effectually with almost no suffering. . . . After leaving me, he gained very rapidly in flesh, and is to-day free from the vice, and has absolutely no craving for the drug. . . . Others that I have since treated have gone through in the same easy and rapid manner." Further on, he informs us that opium smokers, like opium and morphine takers, can only be reliably and satisfactorily treated in an institution where they can be watched and restrained, day and night, for at least two weeks. That institution, reader, is the De Quincey Home, and such is the motive of the book, addressed alike to physicians and to lay readers. The final chapter is on the opium traffic between India and China, which has but a distant relation to the subject of the book, except to make it more interesting to the public.

CORRESPONDENCE.

EFFECTS OF VACCINATION.

To the Editor of THE MEDICAL NEWS:

SIR: As you are perhaps aware, the Board of Health of this State made it obligatory to vaccinate by January 1, 1882, all children sent to school, and unless they had a certificate of successful vaccination they could be expelled. This order, in connection with cases of smallpox that sprang up at different points over the State, produced a wide-spread desire to be vaccinated. Not only scholars, but adults, and children under school age, in large numbers, were vaccinated. It is to the effects of the vaccination of this winter that I wish to call your attention. Whether it was owing to the condition of the virus, or idiosyncrasy of the patients, I am unable to tell, but from some cause the vaccine disease in some cases was very severe.

The virus that I used was bovine, and obtained from a reliable house in Chicago—a firm that only deals in first-class goods. But it matters not where the virus was obtained, the effects were, so far as I have heard, the same throughout this section of country. Dr. Rice, in the *Chicago Medical Journal and Examiner* for February, relates an experience a good deal like my own. He says that "about one in ten of all vaccinated have bad arms, with a high grade of fever, and eruption resembling somewhat that of *rötheln* or German measles." I have seen but three cases of this "confluent" eruption, that is, if eruption it can be called, for it came out in splotches or irregular patches, from head to foot, leaving healthy-appearing skin at intervals. They were not perceptibly raised above the normal skin, and were in some places of a purplish color, in others of nearly a scarlet hue.

The arrangement of these patches was similar to that of urticaria, but had not the burning and itching common to that affection. There were a few cases in which the true vesicular eruption, common to vaccinia, came out on the vaccinated arm.

One of the three cases of peculiar eruption, before mentioned, was a young man of probably eighteen. He was confined to the house for a week, and during this time had fever of a moderate type. He complained greatly at the first of aching of back and bones; he also had a chill. At the end of the week the eruption faded, and by the end of the next week desquemation set in, as he became convalescent.

The other two cases of this kind were children. One of four and the other a year of age. These children had only a mild grade of fever, and so little constitutional disturbance that I believe they did not miss a meal.

This was entirely different with the father of these children; he was confined to his bed for several days, and was unable to do work of any kind for several weeks. He had no eruption, but a very sore arm. At the point of vaccination the vesicle enlarged to the size of a half dollar, and when the crust came off, at the end of the second week, it left a deep pitted ulcer, which healed slowly under the use of carbolized ointment.

I have seen other arms that looked as bad as this, the arm being as badly swollen and the vesicle as large, yet not the same constitutional disturbance. At the end of the first week a fever for several days would set in, but after perhaps a week the patient would be around again and ready for business.

Rather a peculiar case was that of a teacher. She had a chill and high grade of fever the tenth day after vaccination. The arm was very much swollen, the vesicle very large. There was much stomach trouble, vomiting, and nausea. After about twenty-four hours

the fever and stomach trouble subsided, and during the week the arm got better; but at the end of about three weeks after vaccination one of her eyes became inflamed, and about a week from this the other. This last complication compelled her to dismiss school. She said she never had sore eyes before, and as there were no cases for her to receive the contagion from, I strongly suspected the ophthalmia was a sequel of the vaccination.

Another curious condition witnessed in one case and heard of in others, was, some time in the second week, during the height of the inflammation, a hæmorrhagic condition, which extended over part or nearly all of the vaccinated arm. That is, it had that appearance; looking as though the person had received a blow and extravasation had followed under the skin. This condition disappeared when the active inflammation subsided.

Another case, that of a well-developed, hearty child of eight months, which on the eighth day from vaccination had a high grade of fever, with a scarlet rash that covered it from head to foot. In twenty-four hours from the appearance of the rash there was a sudden retrocession, the child got cold, and a convulsion ensued. A few hours after the convulsion the rash again appeared. There were no more convulsions, and after two or three days of fever the child gradually convalesced. There was no throat trouble in this case; this factor would exclude scarlet fever.

Other cases might be enumerated, but these are fair specimens of the freaks of the vaccine disease that have occurred in this section of country. The severity of some of the cases has strongly prejudiced some people against vaccination. The occasional remark is heard that "I would rather have the small-pox than be vaccinated."

I think had the vaccine disease taken as powerfully in Jenner's time as it did this winter in this latitude, he would have had a great deal of trouble in introducing it among the people.

This account is written in the hope that when it meets the eye of other physicians it may induce them to give their experience this winter in vaccination, especially to see if there are others whose experience coincides with mine.

Yours truly,

D. I. McMillan, M.D.

Sunbeam, Ill., March 7, 1882.

To the Editor of The Medical News:

Sir: In the last few weeks almost nine-tenths of our community have been vaccinated, and mostly by bovine virus. We first used points and quills, but being expensive and, we found, rather uncertain, we sent to New York for bovine crusts. These have been used by a number of physicians in this town and vicinity. As a result, in many instances, whole schools have been broken up for from one to four weeks, on account of the severity of the virus; the vaccinated arms were swollen from the shoulders to the tips of the fingers, and presented dark red, sometimes almost black, ulcers, from 1 to 1½ inches deep, and from 2 to 3 inches in diameter, which proved difficult to heal; these often occurred in apparently healthy persons, both old and young. Those who had typical scars were not exempt, but did not suffer so severely, and the disease usually ran a much shorter course. I would be glad to know if this has been the experience of others. Physicians here have had a similar experience.

Respectfully yours,

T. M. Rogers M.D.

Fairfield, Ill., March 13, 1882.

NEWS ITEMS.

DETROIT.

(*From our Special Correspondent.*)

The medical schools of Detroit have just closed their winter sessions. The class at the Detroit Medical College numbered 45; that at the Michigan College of Medicine, 74. The entire number of students at the Detroit Medical College, session of 1880–81, was 118; the entire number attending both colleges at the session just closed, was 119. Thus it appears that the establishment of a second college has not materially increased the number of students attending medical colleges in Detroit. The number graduated in 1880–81 was 20; the number graduated at both colleges the present year is 31. Of course the proportion of graduates varies in different years at most colleges.

Detroit Medical College.—No doubt the natural order of the laws governing the development of medical colleges was somewhat modified by the "new policy" adopted at the Detroit Medical College last spring. It will be remembered that at that time the board of trustees refused to be governed by the wishes of the majority of the then existing faculty, in the matter of making additions to the faculty. As the majority of the faculty could not, in self-respect, retain their positions under such circumstances, they withdrew in a body. A new faculty was made up, in all numbering 28 persons, the fees were reduced from $75 to $60, and a board of 30 counsellors was appointed. Thus the College started upon a new career. It is scarcely probable that the full results of these changes are as yet fully manifest.

The gentleman appointed last spring to fill the chair of physiology in the Detroit Medical College, has just tendered to the trustees his resignation, giving as his reason, lack of harmony in the faculty.

The general characteristics of the commencement exercises were essentially the same as in former years, and like those seen at the average medical college commencement. Music, flowers, wealth, fashion, beauty, speeches more or less highly commending the special college honoring the speaker, the conferring of the degrees, sometimes a prayer and sometimes not, all this followed by a banquet, at which the newly formed doctors, for the first time, mingle with their fellow-alumni and doctors, guests of the faculty and alumni. In a specific manner the display of all these elements was, in Detroit, greater than ever before. Certainly no graduate could wish for a more attractive introduction into general and special society.

The schools after a few days of vacation will open their spring sessions, and so their regular work will go on.

The Michigan College of Medicine, during the past year, has established and successfully conducted a hospital in connection with its college building. It has organized an ambulance service, by which all the sick and injured can be quickly and comfortably removed from one part of the city to another. It has established a training school for nurses, the only one in this city. It has bought a number of lots adjoining its present hospital, upon which it intends to erect a number of small hospitals for the care of special classes of cases. It is rumored that changes are to be made in the teaching staff of both colleges, also that some changes will be made in the requirements of the courses of study, etc.

Both colleges are earnestly endeavoring to so adapt themselves to the existing state of things in the profession and general society as to get the largest and best classes of students.

THE UNIVERSITY MEDICAL SCHOOL at Ann Arbor, the oldest medical school in Michigan, is reported as being more prosperous than ever. Its commencement does not take place till the regular university commencements in June.

BROOKLYN.

(*From our Special Correspondent.*)

AILANTUS TREES.—The Common Council have before them a petition calling for the destruction of the odoriferous ailantus tree, on the ground that it is an enemy to the public health. The names of numerous physicians appear on the petition.

THE CITIZENS' SANITARY SOCIETY, of which Col. C. F. Wingate is Secretary, has issued a circular addressed to the parents of school children, calling for information as to preventable diseases that have been traced to the school-room.

THE PATHOLOGICAL SOCIETY OF BROOKLYN held its annual meeting March 9, electing Dr. W. Wallace, President; Dr. E. H. Bartley, Secretary; and Dr. A. Ross Matheson, Treasurer.

CANADA.

(*From our Special Correspondent.*)

ONTARIO VITAL STATISTICS.—The report of the Registrar-General of Ontario for the year 1880 has just been issued. Number of deaths registered, 19,802; births, 42,312. For every 100 females born, there were 108 males.. The number of illegitimate births was considerably in excess of those in 1879. The mortality was greatest in the month of March, lowest in June. One-ninth of the deaths were caused by consumption. There was a great increase in the number of deaths from pneumonia; over one-third more died of this disease than in 1879. The disease prevailed most extensively in the spring, during March and April. The mortality from diphtheria was also higher, and the disease was most fatal in the country districts. In the twenty cities and large towns there was 1 death in every 36 from this cause; in the country, 1 in every 22. Measles was very fatal in some districts; 265 deaths were registered under this disease. Small-pox caused 123 deaths. Appended to the report is a review of the returns for the ten years during which registration has been in force in the Province.

VIENNA.

(*From our Special Correspondent.*)

NOTES FROM THE CLINIC OF PROF. BILLROTH.—*Neglected Punctured Wound of Thumb—Phlegmon and Gangrene of Forearm—Amputation of Arm—Abortion in Consequence, and Death through Septicæmia.*—A well-built woman, in good physical condition, in the sixth month of pregnancy, entered Billroth's surgical clinic recently and related the story that she had punctured her right thumb with a fork a few days before, that she had thought nothing more of the matter, but went on with washing and other domestic duties. This morning the thumb appeared red, swollen, and was extremely painful. Upon the terminal phalanx a collection of pus was visible. Prof. Billroth remarked, upon the case, that an inflammation, seated in the subcutaneous cellular tissue, could very easily advance through the sheaths of the tendons, cause an extensive suppuration, which might extend from the hollow of the hand up upon the forearm. So long as the inflammatory process is confined to the thumb and hand, incisions for relief of tension and evacuation of pus are practicable. They are of no use, however, when the inflammation has extended into the deeper parts of the forearm. We possess no safe means to limit the advance of an intensive inflammation. The most perfect position of the extremity is of no avail, for the pus is also springing from it, though a trifle thinner and with less disagreeable smell. Some days later, the patient was brought before the auditorium a second time. The tongue was very dry, a significant sign of commencing sepsis. The hollow of the hand was of a black-gray color, the fingers milk-white, while the inflammatory red extended well up upon the forearm. In the cubital fossa, where incisions had been formerly made, and in the course of the arteria brachialis, much pus was collected.

The patient was chloroformed, and an amputation through the middle of the upper extremity was performed. The stump was dressed, according to the method of Bruns, with clay mixed with vinegar. The tongue continued to remain dry, and in general the condition of the woman was very bad. The granulations were very pale. Upon the third day, after the operation, abortion occurred, and with so little pain, that the patient scarcely perceived it. Prof. Billroth remarked that, in the first month of pregnancy, operations, attended with loss of blood, usually cause abortion; but, in the latter half of pregnancy, such an event is very rare. Prof. Billroth related a case which occurred in Zürich. A pregnant woman was covered with earth by an avalanche, and broke both forearms, one thigh, and one leg. Although copious suppuration followed, no abortion ensued. An abundant, normal callus was produced, and the fractures were all perfectly united. Let this case, at the same time, serve as a contradiction to the statement, in many text-books, that fractures, occurring in pregnant women, must remain ununited, or poorly united, on account of the consumption of lime salts in the construction of the fœtal body.

The further course of the present case was very gloomy. The temperature remained more or less constant at 39° R. Gangrene of the stump occurred. Metastasis was plainly indicated in the left wrist, and upon the ninth day after the operation the patient died with all appearances of septicæmia.

Prof. Billroth gave the opinion that it was a very unfavorable prognostic where abortion occurred as the result of a phlegmon. It indicates, in general, suppuration of the uterine surface of the placenta, and through this pus is received into the maternal blood, and general sepsis follows.

The *autopsy* gave the following results: The spleen was swollen, and the kidneys congested, yet small abscesses and infarcts, characteristic of septicæmia, were lacking. The peritoneum behind the uterus was fragile and softened, the uterus itself, not abnormally large, was collapsed. When the left wrist-joint was opened much synovial fluid, turbid and viscous, as in the first stage of arthritis, flowed out.

TUBERCULOUS ULCER OF THE TONGUE.—This condition occurs only seldom, and then generally in connection with tubercular phthisis. This patient is an exception to the rule, as his lungs are entirely free from any tubercular deposits; upon examination, a granulating ulcer, extending from the base to the point of the tongue, with undermined edges, is found. Such tubercular ulcers appearing primarily in the tongue, can be very easily confused with carcinomatous, and especially syphilitic, ulcers. The diagnosis can be readily made, since a carcinomatous ulcer gives a cartilaginous sensation to the examining finger, and a syphilitic ulcer yields at once to iodide of potassium. Treatment: Instead of the formerly practised cauterization with paquelin, powered iodoform is now employed in the Billroth clinic with astonishing success. Prof. Störk has obtained similiar satisfactory results, by means of iodo-

form, in tubercle of the larynx. In the disease, in both situations, however, it is necessary that the iodoform be brought in direct contact with the ulcer. In the present case, the ulcer will be extensively incised, and the iodoform powder, at intervals, for three days, will be applied by means of a very easily managed duster.

Prolapsus Ani.—In six cases Billroth has recently effected a radical cure by the following method: Three-cornered folds of the rectal mucous membrane were cauterized with a paquelin. The bases of these triangles looked towards the orificium ani. The lower end of the rectum shrank upwards within four days, granulations sprang up and in from two to four weeks the prolapses were perfectly cured.

Alumni Representation in the University of Pennsylvania.—The Trustees of the University, in response to the formal request of the Alumni, have authorized the formation of an Alumni Advisory Committee, which shall have the power of visiting the University, attending examinations, and presenting suggestions to the Trustees. The Trustees will annually present to the Alumni Committee a statement of the finances of the University, and will fill every third vacancy in the Board by electing one of four nominees presented by the Alumni Committee.

The Alumni Committee is to consist of 30 members, 6 to be elected annually, and to serve for five years. The nominations for this Committee will be made by the Alumni by ballot, forwarded by mail or otherwise, and for this purpose ballots, containing a large number of names, will be sent to every Alumnus whose address is known. Ballots for the *election* will be prepared containing twice the number of names that there are vacancies to be filled—these names being those that received the highest number of votes. The election will take place on Commencement Day, in June, and ballots must be cast in person. Alumni officially connected with the University in any capacity whatsoever are debarred from serving on, or voting for, members of the Committee. The Provost will be an *ex-officio* member.

The Alumni Committee of 30 will be divided into three classes, 10 representing the Alumni of the Departments of Arts and Sciences; 10 of the Medical and Collateral Departments; and 10 of the Law Department.

It is confidently believed that this grant of power to the Alumni by the Trustees, similar to that possessed by the Alumni in some of the other leading Universities of the country, will tend to foster the interest of the Alumni in the University, and in every way redound to the benefit and advancement of the Corporation.

The Public Health.—In addition to the returns of deaths for the week ending March 4, published in our last issue, we have to note the following items: Small-pox caused 17 deaths in Chicago; 5 in Richmond, Va.; 2 in New Orleans, and 1 each in the District of Columbia, Vicksburg, Miss., and Omaha, Neb. There were 3 deaths from cerebro-spinal meningitis in Chicago, and 1 in Wheeling, W. Va., during the week. A slight increase is observed in the mortality from diphtheria both in Chicago and in Brooklyn, 11 deaths being reported in the former, and 14 in the latter city; 4 in Buffalo; 3 each in the District of Columbia, Detroit, and Wheeling, W. Va., and 1 in Vicksburg, Miss. Scarlet fever caused 23 deaths in Brooklyn, against 27 in the preceding week; 6 in Buffalo; 5 each in Chicago and Detroit; 2 in Vicksburg, Miss., and 1 each in Davenport and the District of Columbia. Chicago reports 6 deaths from typhoid fever; Buffalo, 3; Richmond, Va., New Orleans, and the District of Columbia, each 2, and Brooklyn 1 death from this cause. From malarial fever 5 deaths occurred in the District of Columbia; 3 each in Brooklyn, Chicago, and New Orleans, and 1 each in Omaha, Neb., Shreveport, La., and Detroit. Measles is prevalent in Chicago, Brooklyn, and Buffalo. There were 20 deaths from pneumonia in the District of Columbia, against 9 deaths from the same cause in the previous week.

For the *week ending March 11*, we present the following brief notice of some of the principal causes of death in a number of prominent places. There is no abatement of small-pox in Cincinnati, the number of deaths being 31 against 27 in the previous week. There were 11 deaths from this cause in New York; 7 in Philadelphia; 8 in Pittsburg; 5 in Richmond, Va.; 13 in Chicago; 2 in Omaha; and in Wilmington, Del., and Milwaukee, 1 each. It is said to be epidemic in South Bethlehem, Pa., 100 cases having been reported since the 14th instant, and the disease is of a malignant type. 44 new cases were reported in Pittsburg during the week.

Diphtheria is less prevalent in Boston and Philadelphia, 6 deaths being reported in each; 14 in Chicago; 4 in Pittsburg; 2 each in Providence, R. I., Wheeling, W. Va., Cleveland, and Dayton, O., and in Indianapolis; and 1 each in New Haven, Conn., Cincinnati, Louisville, Ky., and Augusta, Ga.

Cerebro-spinal meningitis has made its appearance in Winchester, Mass., a number of cases having been reported there quite recently. There were 5 deaths from this cause in New York; 3 each in Cleveland and Chicago; 2 each in Philadelphia and New Haven; and 1 each in Providence, Wilmington, Del., Wheeling, Pittsburg, Milwaukee, Nashville, and in Louisville. Typhoid fever caused 14 deaths in Philadelphia, an increase of 6 over the number recorded the preceding week. New York reports 5 deaths from this cause; Boston and Chicago, each 4; Wheeling, Cleveland, and Wilmington, Del., each 3; Pittsburg, Indianapolis, and Cincinnati, each 2; and Providence, R. I., New Haven, Ct., Charleston, Louisville, Nashville, and Milwaukee, each 1 death from this disease. Only 2 deaths are reported from typhus fever, and these occurred in New York City.

In New York and Brooklyn, scarlet fever prevails to a considerable extent. The deaths in the former were 79; in Philadelphia, 7; in Chicago, 4; in Pittsburg, 3; in Cleveland and Omaha, each 2; and in Boston and Milwaukee, each 1. There were 31 deaths from measles and 20 from whooping-cough in New York; elsewhere these diseases are not reported as being prevalent. The increased number of deaths from consumption and acute lung diseases, and the few deaths from diarrhœal diseases, usually noticeable at this season of the year, are apparent in the mortuary records for the week.

Health of Michigan.—The Bulletin of the State Board of Health for the week ending March 4, 1882, indicates that influenza, measles, and rheumatism have increased, and that bronchitis, pneumonia, and whooping-cough have decreased in area of prevalence.

Diphtheria was reported present during the week ending March 4, and since, at 26 places; scarlet fever at 18 places; measles at 5 places; and small-pox at 8 places in all, as follows: At Parkville, St. Joseph Co.; in Kimball and Port Huron townships, St. Clair Co.; at Stanton, Montcalm Co., February, 28; at Detroit and White Cloud, March 4; at Spalding, Menominee Co., 6 cases; and among the Indians near Spalding, 11 cases, March 7, 1882.

University of Maryland.—A bill to confer authority on the Regents of the University of Maryland to grant degrees of doctor or licentiate of dental surgery, pharmacy, or other cognate branches of medical science, is before the Legislature of Maryland.

M. Paul Bert, the eminent physiologist, has been succeeded in the portfolio of Minister of Public Instruction and Fine Arts in the French Cabinet by M. Jules Ferry.

New Source of Vaccine Virus.—A new source of vaccine virus has recently been discovered in France, according to the *Progrès Médical*. A cow was recently discovered at Eusyres, in the vicinity of Bordeaux, affected with the vaccine disease spontaneously developed. From the virus thus obtained a heifer was inoculated, and sent to Paris. An examination by the members of the Academy took place, at which it was shown that about thirty genuine pustules were located in the vicinity of the teats. The virus taken from these pustules produced other pustules on children and heifers exactly identical with those of normal vaccine. From the vaccine virus thus obtained, M. Chambon, from whose stables the hospitals of Paris are supplied, has renewed his animal vaccine. He now favors the propagation of this, called the Gironde, vaccine in the city. The virus is considered equal to the most renowned, that of Passy, discovered in 1836, and that of Beaugency, obtained in 1866.—*Pittsburgh Med. Journ.*, March, 1882.

Baltimore Eye, Ear, and Throat Charity Hospital.—This is the title of a new hospital which has been recently incorporated in Baltimore for the treatment of diseases of the eye, ear, and throat. The medical staff of the hospital is composed of the following well-known specialists: Eye and Ear Department, Drs. Russell Murdoch, Samuel Theobald, Samuel F. Frank, and I. Bermann; Throat Department, Drs. J. H. Hartman, Samuel Johnston, and John N. Mackenzie. The consulting surgeons are Drs. Christopher Johnston, L. McLane Tiffany, Alan P. Smith, and O. J. Coskery; the consulting physicians, Drs. Ferdinand Chatard, Samuel C. Chew, Riggin Buckler, and G. W. Miltenberger. It is understood that the hospital, which will have an out-door and in-door department, will be located in the western section of the city.—*Maryland Med. Journ.*, March 1, 1882.

Regulating Prostitution.—The following resolution was adopted at the last meeting of the Baltimore Academy of Medicine: "That the Academy of Medicine protests against the passage by the Legislature of any bill regulating the registration and examination of prostitutes." The Secretary was directed to communicate this action to the Chairman of Health of both houses of the Legislature.—*Maryland Med. Journ.*, March 1, 1882.

The next International Medical Congress.—Prof. Panum has been chosen to preside at the next meeting of the International Medical Congress, which will be held at Copenhagen.

Weston Asylum for the Insane, West Virginia.—A committee of the State Legislature has just been investigating certain specific charges which were made against the management by certain newspapers, and they report that they are in part true, and recommend the removal of two of the Executive Committee of the Board of Directors, and of the First Assistant Superintendent, on account of drunkenness. The charge of inattention on the part of the Superintendent, Dr. Bland, was disproved, and the committee report him to be exceedingly attentive to his duties.

New Journals.—Two new journals have been added to the already extensive list of periodicals devoted to specialties: the *Monatshefte für Praktische Dermatologie*, and the *Revue Générale d'Ophthalmologie*. The first number of the former journal was announced to appear March 1; it will be edited by Drs. Hebra in Vienna, Lassar in Berlin, and Unna in Hamburg. The *Revue Générale d'Ophthalmologie* is edited by Prof. Dor in Lyons, and Dr. Meyer in Paris. It is a monthly journal, and proposes to furnish a complete bibliography of all ophthalmological literature, with critical reviews and original articles.

Medical College Commencements.—The Annual Commencement of the University of the City of New York was held on March 7, and the degree of M.D. was conferred on 213 candidates.

The Commencement of the One Hundred and Sixteenth Annual Session of the Medical Department of the University of Pennsylvania was held on Wednesday, March 15, and the degree of M.D. was conferred on 117 candidates, by the Provost, and the valedictory address was delivered by Prof. James Tyson. A notable circumstance in connection with the ceremonies, was the previous announcement that it was requested that "no flowers" be sent; a very sensible innovation of Commencement customs, which is deserving of general adoption.

The Annual Commencement of the Buffalo Medical College was held on the 21st of February. Rev. Dr. Darling, President of Hamilton College, delivered the address to the graduating class, and Prof. Austin Flint delivered the address before the alumni. The degree of M.D. was conferred on 65 candidates.

The Medical Department of the University of Louisville held its commencement exercises on February 28. The degree of M.D. was conferred on 94 graduates.

The Commencement of the Louisville Medical College was held on the 20th of February, and the degree was conferred on 54 candidates.

The Commencement of the Hospital College of Medicine (Louisville), was held on February 24, and 33 gentlemen received the degree of M.D.

The Seventh Annual Commencement of the Medical and Dental Departments of the University of Tennessee was held on February 23. The medical degree was conferred on 57, and the dental on 12 candidates.

The Sixty-first Annual Commencement of the Medical College of Ohio was held at Cincinnati, on March 1. Dr. W. W. Seely, Dean of the Faculty, in an address stated that, "the session just ended shows the largest number of matriculates of any in the history of the College (342), and of this number, 103 having fulfilled all the conditions necessary for graduation will receive their degree of Doctor of Medicine." The valedictory address was delivered by Prof. James G. Hyndman.

The Detroit Medical College held its Fourteenth Commencement on March 2, and graduated a class of 11.

The Michigan College of Medicine held its Second Commencement March 1, and graduated a class of 20.

Gift of a Medical Library.—Dr. James P. White's valuable medical library has been donated to the Buffalo Medical College.

Organic Remains in Meteoric Stones.—In the *Popular Science Monthly* for November, 1881, Mr. Francis Birgham gives a very interesting account of the microscopic examination of meteoric stones by Dr. Hahn, a German geologist, which has been confirmed by Dr. Weinland. He has found, he asserts, distinct animal remains in such stones, belonging to the classes of sponges, corals, and crinoids, and allied to our terrestrial forms, but far smaller in size. Three varieties of sponge have been identified, and he believes he has also discovered traces of vegetable life. Among the fifty species so far discovered, there are none of higher animal forms. Curiously enough, too, it seems that all the meteoric species, from several different falls, are so

alike as to lead to the belief that they all come from one and the same body. Mr. Darwin and other English scientists seem to have confirmed his observations after an examination of the specimens.

Poisoning by Iodoform.—Prof. König, of Göttingen, publishes the following circular in the *Centralblatt für Chirurgie* for December 31: In face of the increasing employment of iodoform it is of very great importance that an answer, based upon an extensive reference to cases, should be given to the question, whether, and under what circumstances, this remedy has in an indubitable manner been the cause of death in persons treated by it; and also the further question, whether the observation has been made that during the use of this substance a peculiar form of mental alienation has been produced. It is obviously desirable that short histories of the cases in question should be supplied. Prof. König promises that he will make the most discreet use of any communications that may be forwarded to him in answer to these highly important queries, and will publish the results of his examination of them in the *Centralblatt.—Med. Times and Gaz.*, Jan. 21, 1882.

The Pay-wards of St. Thomas's Hospital.—The experience of the first nine months of the working of the St. Thomas's Home has been satisfactory enough to warrant the governors in continuing the undertaking. The number of patients under care has risen from eleven in March to thirty-five in November, the average daily number for the whole time being twenty-two. The result is a profit of more than £400 on the working expenses. This is, of course, not clear profit, the interest on the preliminary expenses of fitting up the wards not being taken into account. But, as there is no rent to be paid, the surplus is sufficient to pay off the preliminary expenses in a short time if the present number of patients be maintained or increased. The total number of beds at present available is forty-one. The medical superintendent reports that the Home has been of especial value to those who have not homes of their own in which they could be efficiently nursed and cared for during sickness; such as clerks living in lodgings, visitors to London, colonists, and travellers who have been taken ill in England, or who have returned to their country on account of ill health. Eight of the patients have been medical men.—*British Med. Journ.*, Jan. 21, 1882.

Heredity in Arterial Anomalies.—So far as we know, but a single instance has ever been recorded of hereditary variations in the vascular system. In the hope that the knowledge of such a possibility may stimulate observation and inquiry into the family history of any observed case, we desire to call attention to this unique case, published by Dr. J. Schneck, in the *Chicago Medical Journal and Examiner* for 1879, p. 475. At three to four cm. above the wrist the radial artery passed over the supinator longus muscle, and ran over the tendons of the radial extensors above the styloid process, to seek its normal distribution. The family consisted of the father, six children, and fifteen grandchildren—twenty-two persons in all. In nineteen out of the forty-four arms the above anomally occurred. Four times both arteries were abnormal, twice the right radial only was abnormal, and nine times the left radial only was abnormal. In only seven of the twenty-two persons were both arteries normal. The mother and the children-in-law had normal arteries, so that it was purely a paternal inheritance; yet the daughters transmitted the anomally better than the sons. The father had both arteries abnormal; every one of the six children had the left artery, and the left only, abnormal; four of the grandchildren had both abnormal, like their grandfather; four had only one abnormal, like one of their parents; two of the six children had no families.

Dr. Hans Kundrat, Professor of Pathology in the University of Gratz, has been appointed as Dr. Heschl's successor to the Chair of Pathology in the University of Vienna. Dr. Kundrat is well known as having been a pupil of Stricker and Rokitansky, and an assistant of Hyrtl.

Honors to American Physicians.—At the meeting of the Verein für innere Medicin of Berlin, held on January 30, 1882, Drs. Flint, Seguin, and Jacobi were unanimously elected corresponding members of the Society for America; and Sir Wm. Gull and Drs. Grainger, Stewart, and Pavy corresponding members for England.

Memorial Statue of Albrecht von Grafe.—Arrangements have been made between the committee for erecting a memorial of the illustrious ophthalmologist, von Gräfe, and the magistrates of Berlin, by which the statue will be presented to the town, while the municipal authorities undertake to preserve it and the ornamental ground on which it stands. It is intended that the ceremony of unveiling the statue shall take place on May 22, the anniversary of the birth of von Gräfe.—*British Med. Journ.*, Feb. 18, 1882.

OBITUARY.

Joseph Pancoast, M.D., Emeritus Professor of Anatomy in the Jefferson Medical College. This venerable and illustrious surgeon died at his home in Philadelphia on the morning of March the 7th, in the seventy-seventh year of his age. The immediate cause of his death was an influenza, accompanied by congestion of both lungs. This occurring in a constitution already enfeebled, and incapable of sustaining prolonged efforts of expectoration, led to the exhaustion and suffocation from which he sank.

Dr. Pancoast was born on the 23d of November, 1805, in Burlington Co., N. J. His early education was obtained at a private school near his father's house; at a later period he was sent to an advanced seminary in the town of Burlington, under the superintendence of the distinguished mathematician, John Gummere. He afterwards studied medicine at the University of Pennsylvania, graduating in 1828, and settled in Philadelphia. He at first opened his office on Fourth Street, near Race Street, and on his marriage removed to the north side of Walnut Street, below Fourth Street. He thence subsequently moved to his late residence on Chestnut Street, near Eleventh Street. He early devoted his attention to the special study of anatomy, and in 1831 he took charge of the well-known anatomical rooms on College Avenue, now Chant Street. Here he successfully taught practical anatomy for seven years. In 1834 he was appointed one of the physicians to the Philadelphia Hospital, in the Blockley Almshouse, and soon after he was made physician-in-chief to the children's hospital in that institution. In 1838 he was chosen as one of the visiting surgeons to the Philadelphia Hospital, and continued to serve in that capacity until 1845. In 1838 he was elected to the chair of surgery in the Jefferson Medical College, succeeding Dr. George McClellan, and this position he held until 1841, when in the reconstructed school he assumed the chair of anatomy. He remained as professor of the latter branch until 1874, when he resigned from the active duties of his chair, with the well-deserved title of emeritus professor conferred upon him by the Board of Trustees of the school. In March, 1854, he was elected

one of the surgeons to the Pennsylvania Hospital, and served as such until February 29, 1864, when he resigned from the hospital.

For very many years of his life Dr. Pancoast enjoyed a large and lucrative practice, and faithfully earned by hard work that enviable reputation to which he was so justly entitled. As a surgeon few have equalled him, none have surpassed him. During the active years of his practice he was a very busy man, but yet he found time from his daily pressing cares to devote considerable attention to literary work. In 1831 he translated from the Latin Lobstein's *Treatise on the Sympathetic Nerve*, and subsequently edited Manec on the *Sympathetic, and on the Cerebro-Spinal System in Man*, Wistar's *Anatomy*, and Quain's *Anatomical Plates*, and in 1844 he published his well-known *Treatise on Operative Surgery*.

During the later years of his life Dr. Pancoast suffered greatly from ill-health, and after his resignation in 1874 of his chair of anatomy in the Jefferson Medical College, he gradually withdrew from the active duties of his profession. In May, 1877, the formal opening of the Jefferson College Hospital was, at the request of the trustees, inaugurated by him in an eloquent address, and this was, we believe, his last official act in the school with which he was connected for more than forty years. At the time of his death Dr. Pancoast was the only survivor of the celebrated faculty of 1841 in the Jefferson Medical College.

In looking back upon the career of Dr. Pancoast, one cannot fail to be strongly impressed with the belief that he was a great surgeon, pre-eminently an operative surgeon. The fame of his skill was national, indeed, almost world-wide. His operations were characterized by boldness of conception and by a consummate brilliancy of execution, based upon a real, thorough anatomical knowledge. This knowledge was in him peculiar, and of a broad type. It was not merely the anatomy, the topography, the pathology, and the surgery of the books, but it was all these combined and made applicable for useful purposes. His information was, as it were, at his finger's ends, always capable of immediate and practical application. It thus happened that although he was a bold operator, and one who did not fear to take what might seem perilous chances, yet in reality he was a most careful operator, self-reliant and confident in his own ability, always sparing the blood and husbanding the resources of his patient. He was one who knew well how, "out of this nettle, danger, to pluck this flower, safety."

Another marked trait of Dr. Pancoast, and one for which we think he did not always receive due credit, was the great care he expended upon the examination of his patient before operation. He would see him over and over again, ply him with questions, examine him, study him minutely, until he had made himself master of the individual and had detected his idiosyncrasies. We suspect, indeed, that much of his operative success, for he was undoubtedly a successful operator, was due to his unwearying assiduity in this respect. As an operator, moreover, he was ingenious and original; he devised a number of new procedures, which have successfully stood the test of time, and which are now recognized and known as his own conceptions.

As a teacher of anatomy, and as a clinical instructor, his influence over his classes was very great. His whole object was to teach anatomy, not the anatomy of the dead, but rather of the living. Anatomy was to him a living, clinical study; medical anatomy, surgical anatomy, anatomy *applied*. The thoughtful student, who faithfully attended his lectures, could not fail to carry forth with him a mass of practical information of incalculable value in his future professional life. Deeply imbued, as Prof. Pancoast was, with the learning of books, the charm of his lectures lay in that unwritten surgery, the outcome of experience, which he instinctively taught. It was this, more than anything else, which gave that value to his anatomical teachings, which only those who have heard him can appreciate. He was in every sense a great surgeon, a great operator, an accomplished teacher, and his death will be mourned not only by the pupils who have sat at his feet, but by the wide brotherhood of surgeons throughout the world.

NOTES AND QUERIES.

THE POTASH THEORY OF URÆMIA.

To the Editor of THE MEDICAL NEWS:

SIR: Reading Dr. Sencindiver's note in the issue of the NEWS of February 18, wherein he says he got uræmic poison and death while administering "chlo." and iodide of potassium to a case of scarlatina, leads me to call attention to an article on "Chlorate of Potassium" by Trousseau. He cites Melsens as declaring chlorate and iodide of potassium a dangerous combination; that dogs upon which the experiment of giving it was tried died in a few days. He further adds that liver and intestinal lesions were found, but says nothing as to whether there were any signs of uræmia or not. His theory is that the chlorate yields sufficient oxygen to convert the iodide into the iodate of potassium, which is poisonous.

Possibly the uræmic theory better explains the cause of death; but, be it as it may, I think it advisable to exercise some caution in administering the above combination.

Very respectfully yours,

C. W. WEBB, M.D.

WELLSBORO, PA., February 20, 1882.

[Our correspondent is, no doubt, correct in his chemical statements, but as the death of the child occurred from uræmia, and not from the direct toxic action of the medicines given, the supposition that the administration of potash salts precipitated the uræmic attack seems in a high degree probable.—ED.]

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MARCH 7, TO MARCH 13, 1882.

ALEXANDER, R. H., *Major and Surgeon.*—Now awaiting orders, to report in person to the Commanding General, Department of the Missouri, for assignment to duty.—*S. O. 52, A. G. O., March 6, 1882.*

BROWN, H. E., *Major and Surgeon.*—Now awaiting orders, to report in person to the Commanding General, Department of the South, for assignment to duty.—*S. O. 52, C. S., A. G. O.*

DICKSON, J. M., *Captain and Assistant Surgeon.*—Now awaiting orders, to report in person to the Commanding General, Department of the East, for assignment to duty.—*S. O. 52, C. S., A. G. O.*

LAUDERDALE, J. V., *Captain and Assistant Surgeon.*—Relieved from duty in the Department of the South, and to report in person to the Commanding General, Department of Dakota, for assignment to duty.—*S. O. 52, C. S., A. G. O.*

FINLEY, J. A., *Captain and Assistant Surgeon.*—At expiration of his present leave of absence, to be relieved from duty in the Department of the East, and to report in person to the Commanding General, Department of Texas, for assignment to duty.—*S. O. 52, C. S., A. G. O.*

GARDNER, EDWIN F., *Captain and Assistant Surgeon.*—To report in person to the President of the Medical Examining Board, in session in New York City, for examination for promotion, and, on its conclusion, to report by letter to the Surgeon-General.—*S. O. 52, C. S., A. G. O.*

ROBINSON, S. Q., *Captain and Assistant Surgeon.*—To report in person to the President of the Medical Examining Board, in session in New York City, for examination for promotion, and, on its conclusion, to report by letter to the Surgeon-General.—*S. O. 52, C. S., A. G. O.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

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ORIGINAL LECTURES.

ON THE TRANSFUSION OF BLOOD.

(CENTRAL ARTERIAL TRANSFUSION.)

A Lecture delivered at the Pathological Institute of the University of Leipsic, February 2 and 3, 1882.

BY PROF. JULIUS COHNHEIM.

(Reported for THE MEDICAL NEWS, by special permission of the author, by Dr. WALTER MENDELSON, of New York.)

THAT a hæmorrhage in which more than half the total quantity of the blood is lost proves fatal, I have already told you. Let us now see, gentlemen, what the effects on the circulation will be when more than a quarter, yet less than half, the contents of the vascular system is withdrawn from the body. After a hæmorrhage of this kind the arterial pressure does not rise again as we saw it do when smaller quantities of blood were taken; but, on the contrary, stays low, and its lowness will increase the nearer the anæmia we have produced approaches the fatal limits. With a continuous low arterial pressure, however, the velocity of the blood-current has also diminished, as is shown by a longer and longer time being necessary in which to obtain the same amount of blood. As regards the heart, the incomplete filling of the ventricles sometimes causes their less frequent contraction, more commonly, however, we find the pulse more rapid than normal, owing to the fact that on account of the normal stimulus to the pneumogastric centre being diminished by the anæmia present, the heart, in consequence, beats with increased frequency. Not only is the pulse more frequent, but each individual beat is smaller, as you will see on this curve traced by the kymographion. This diminished pressure and retarded velocity continue for some time after a loss of blood amounting to 2½ to 3 per cent. of the body's weight, yet still more striking are the changes which the composition of the blood experiences. For after the piessure has become low—and values of 40–50 mm. of mercury are not seldom obtained in the carotid of a dog from whom a good third of its blood has been withdrawn—a reversal of the normal direction which the passage of fluids takes through the walls of the capillaries ensues, and instead of a transudation from within outwards occurring, a resorption from without inwards takes place, and at the same time the lymph from the ductus thoracicus flows into the partly empty vena subclavia with increased rapidity. Lesser has shown, however, that the latter element is by no means necessary in causing a thinning of the blood after bleeding, for even after ligating the thoracic duct, the watery parts of the serum were found to continuously increase, which could only have been caused by a resorption of the fluids of the tissues. This hydration of the blood will continue until the pressure within the capillaries is equal to that of the fluids which surround them, but even when this occurs, the pressure in the arteries is by no means necessarily restored to its original height. To obtain the latter result, by far the most certain and efficient means is *the transfusion of blood, the same in kind* as that which was lost.

It is easy to see why transfusion should be so incomparably preferable to all the other means ordinarily used after hæmorrhage, it is because by it those elements of the body which have been lost are restored in the most direct and complete manner possible. The blood thus introduced into the emptied vessels, as long as still possessed of all its vital properties, becomes at once an integral part of the new organism in which it circulates, the corpuscles remaining intact, and performing the same functions in the respiratory exchange of gases as the original ones, still remaining, do, and the fluid portions, in the same way, taking part in the formation of lymph and in the various processes of transudation. As far as performing its functions goes, it makes little difference, too, whether the blood be injected as it is, or whether it be previously defibrinated, for it is not at all probable that during a hæmorrhage there is any very serious loss of white blood globules, those which, you will remember, are so important in the formation of fibrine.

In a previous lecture I told you of the discovery made by Armin Köhler, that the fluid portions squeezed from a mass of blood which has been allowed to spontaneously coagulate, contain large quantities of fibrine-ferment, and that this fluid, when injected into the vein of a rabbit, produces almost instant death by coagulating the blood already present. I also told you that blood defibrinated by beating with rods or by any other of the usual quickly-acting mechanical means, contained either none of this dangerous "ferment" or at least so little as to be of no importance. You will, therefore, use one of the latter methods when you wish to defibrinate blood for transfusion.

A much more important consideration than defibrination or non-defibrination is that the blood used be of the same kind as that already circulating in the vessels, for only if this precaution be observed will it continue to live and perform its functions in the vascular system into which it has been introduced. A heterologous blood is not only useless, but, indeed, of the greatest danger to its recipient. It is now more than two hundred years ago that the observation was made that the injection of an unlike blood, as, for instance, that of a lamb into a fox, that of a sheep into a dog or wolf, had a most pernicious effect on the animals so treated, and it is a humiliating fact for medical science that only a therapeutical mystification of the past few years should have brought this question of the action of foreign blood in the vascular system to the crucial test of experiment. These experiments have shown that the injection of inconsiderable quantities, as a rule not more than ten per cent. of the original amount of blood, is sufficient to cause the death of the animal used, generally within the first or second day. Most commonly lamb's blood was injected into dogs (lamb's blood had been the kind usually used by the advocates of this method in transfusion in human beings), and it is for this combination that the above figures apply. Even those dogs which had received less than ten per cent., and who consequently survived the operation, showed during the first few days following all the symptoms of grave disturbances of the system. Bloody vomiting and diarrhœa, dyspnœa, anorexia, and great prostration were observed in all in which the amount injected had not been too small. One important symptom was never absent, namely, a tendency to hæmorrhages. These hæmorrhages were in part true extravasations, found in various organs and serous cavities, and in part merely bloody discolorations from the presence of hæmoglobin in the transudations, as, for instance, in the aqueous humor and the urine. Ponfick has demonstrated for hæmoglobinuria in particular, that it appears constantly after the

injection of one per cent. of foreign blood into the vessels of a dog. The reason why an unlike blood is so deleterious to the circulation and general condition of an animal is no doubt to be sought in the fact that *the serum of one species is a direct poison for the corpuscles of another*. This remarkable fact was first determined by Prévost and Dumas, and has recently been further investigated by Landois, who found that the blood corpuscles of one species were dissolved not only by the serum alone, but also by the lymph and other transudations of another. Not, however, that when two different kinds of blood are mixed, the corpuscles of each are dissolved, but the different species have corpuscles possessing unequal powers of resistance; so the corpuscles of rabbit's blood are dissolved in dog's blood or serum, while on the other hand the corpuscles of dog's blood are not destroyed by rabbit's blood. The hæmoglobinuria and the staining of the fluids of the body undoubtedly arise from the solution of the corpuscles either of the injected blood or of that already present. The other severe symptoms, however, are not so readily explained. As regards the hæmorrhagic tendency, it may depend on a dearth of functionally active red corpuscles; still we should not underrate the possible effects on the vascular walls of the free hæmoglobin, or the foreign blood itself. Whether the hæmorrhages take place by diapedesis, or by rhexis, has not been absolutely determined. More investigation, also, is needed to determine what changes in the functions of various organs are produced, especially whether any fibrine-ferment is liberated, as has been supposed by some, though in my own investigations I have not observed any extensive coagulation following the operation.

From a consideration of the foregoing facts we see that it would not only be useless, but absolutely wrong and unjustifiable to use any other but homologous blood in a case where transfusion is indicated. Among these indications the most prominent is that of anæmia produced by hæmorrhage, but there are other cases where transfusion may be practised with benefit, and those are such where it is desired to replace with fresh blood, such as has from any cause been rendered incapable of performing its functions. The latter indication, of course, is worthy of consideration only when the cause which has rendered worthless the blood already present can be ascertained, as, for instance, after poisoning with coal-gas. I cannot but express my disapproval of those measures which would substitute healthy blood for that circulating in the vessels of a patient suffering with diabetes, leucocythæmia, pyæmia, or even tuberculosis, as has been suggested by some, for in these diseases, gentlemen, the blood is but secondarily affected, and even though you were to remove the morbid blood and replace it by a healthy fluid, yet the cause of the disease would remain the same, and in a very short time the new blood would be in exactly the same state as that which had been withdrawn. In cases in which substitution is really indicated the elimination of the worthless must, of necessity, precede the introduction of the healthy blood, and the success of the operation will be in proportion to the completeness of the substitution. Panum has succeeded in replacing nearly the entire amount of the blood of one dog by the defibrinated blood of another without the animal showing the slightest symptoms of any disturbance of function. There are several different methods used for transferring new blood into the vascular system; the simplest seems to be to transfuse the blood from an artery of one individual directly into the vein of another. Still, simple as this method is, I would not recommend it to be used in transfusion in human beings—no, not even for animals. There are two great objections, the first being that one cannot determine with accuracy the amount injected, and the second is that it is almost impossible to prevent the blood entering the vein, and consequently the right ventricle, under a high arterial pressure, a circumstance which in profoundly anæmic or poisoned individuals may be of the very gravest consequences. For the same reason I would advise you against the use of the syringe; better use a glass funnel and cannula of the same material, through which the previously defibrinated, filtered, and warmed blood may be allowed to run gently into the vein. But even this last method, experience has taught me, is not without its serious objections, for in spite of every precaution it is not always possible to prevent air-bubbles, or small coagula formed after the defibrination, being carried in the vein with the blood. Then, too, I have frequently experienced that a current of blood entering even under a pressure of not more than ten to twelve millimetres of mercury has exercised a paralyzing influence on the weakened heart, instead of stimulating it. All these dangers may be avoided by injecting the blood, not into the veins, but into the arteries.

The injection, to be sure, must not be made peripherally, for the peripheral arterial twigs will contract to such a degree as to require great force to overcome and drive the blood into the capillaries, and I have seen a hand covered with ecchymotic spots due to the bursting of capillaries from the employment of such force. The central end of the cut artery (the radial being a convenient vessel) is used, and into this the blood is injected by means of a syringe with force just sufficient to overcome the pressure in the artery. The injected blood mixes with that already present in the vessel, and flows centrally till the first large proximal branch is reached, when it is carried in a peripheral direction again into the capillaries, where it not only becomes thoroughly mixed before entering the veins, but any coagula present are detained; capillary embolism of the muscles and skin being, as you know, owing to the abundant anastomoses, of no significance whatsoever. In this way the blood reaches the heart under the same pressure as that already existing, and strained of all coagula. It is true that my experience has only been obtained from experiments on animals; but, from the successful results, I can recommend *central arterial transfusion* as the least dangerous and at the same time the most efficient method.

Ponfick has recently recommended indirect transfusion into the peritoneal cavity; but, if opposed to the direct transfusion into a vessel, I cannot see its advantages. True, the blood is absorbed, even with a certain degree of rapidity; but still very slowly when compared to the immediate absorption which occurs in direct transfusion. In cases of dangerous anæmia from hæmorrhage, therefore, where transfusion has met with its greatest successes, the peritoneal method can be of but little good; only in anæmias of slighter grade, it might compete with direct transfusion. Then, too, comes the fact that the introduction of a cannula into the peritoneal cavity of a human being is certainly no easier than into a superficial vein or artery; while, on the other hand, it is an infinitely more dangerous procedure, for, aside from everything else, the perfect disinfection of the blood used is an impossibility, and I need hardly remind you how much more dangerous infectious material is when introduced into the peritoneum than when into a bloodvessel. Indeed, I know of several cases of peritoneal transfusion, performed by some of our best and most careful operators, in which a fatal peritonitis resulted. You may urge that in a large number of cases this mode of transfusion has been very successful, but you should consider what "success" means in these cases. Really, the only cases where one can absolutely point to transfusion, as having directly saved life, are those in which death has not resulted even after the

loss of what has been proved to be a fatal amount of blood, namely, one-half. Anæmias of less degree, we know, are usually survived, and the blood is spontaneously regenerated. How much influence, in effecting this regeneration in the latter cases, is to be ascribed to the new blood introduced, must, to a large degree, depend merely on the opinion of the physician.

If we wish to avert the evil consequences of a considerable hæmorrhage by means of transfusion, we must, of course, in order to get the full benefit of the operation, inject as much, or at least nearly as much, blood as was previously lost. If this be done, the spectacle which presents itself is most striking, for from a condition of extreme anæmia, with all its attendant symptoms, the animal is rapidly and effectually restored to its normal condition. The pulse-beats become fuller, and the arterial pressure rises in exact proportion to the amount of blood injected, until at last it reaches nearly the normal limit. If the dog be now[1] removed from the operating-table, you will see him run about in a natural and lively manner, while before the transfusion you perceived he was too weak to even move a leg. This restoration is, as I have insisted on before, permanent. In experimenting on animals it is, of course, not difficult to procure as much blood as is required; but in actual practice the indications to restore the amount of blood lost are more easily presented than fulfilled, for when can three or four pounds of fresh human blood be readily obtained? As a rule, one must be content to replace but a part of the quantity lost, and although an immediate recovery is not obtained, still the patient is put in a much better condition for a spontaneous cure, for not only is the degree of anæmia diminished, but in consequence of less work being put upon the blood-producing organs, its duration also; in a word, it is as though the patient had suffered from a moderate instead of from a severe hæmorrhage.

We have seen now how, in the transfusion of homologous blood, we possess a truly ideal remedy for combating anæmia, one that in its sphere is unequalled. Indeed, it is not too much to say that, with the exception of transfusion, there is no means of restoring the normal quantity of blood, except the regenerative power inherent in the organism, and all that medication can do is to present the most favorably conditions for the execution of the latter. Unfortunately, however, our acquaintance with these conditions is as yet too imperfect to permit us to formulate any exact procedure; but one thing is certain, and that is, that for the regeneration of the blood it is absolutely necessary for the organism to be alive. The greatest danger, however, which presents itself after a severe hæmorrhage, is that the arterial pressure is diminished to a point where life for any length of time becomes impossible; therefore, any means which will increase the pressure in an anæmic individual will, of course, be highly acceptable. Such means we have in the very simple operation of transfusing a weak solution of common salt into the bloodvessels. We choose a solution whose degree of concentration shall present a fluid as nearly indifferent to the blood globules as possible. This varies slightly in different animals. For the dog a salt solution of a strength of 0.6 per cent, with perhaps 0.05 parts of sodium hydrate added to every litre, has proved to be the best. If by repeated bleeding the arterial pressure of a large, strong dog be diminished to one-half, or even one-third of its original altitude, and then a quantity of warm salt solution equal to the amount of blood withdrawn, be injected into a vein, the dog's pulse will be observed to become fuller and stronger and the arterial pressure will be seen to rise again to its original height, and, as I have observed repeatedly, stay there for half an hour or more. Exactly when a fall again occurs, I am unable to tell you, but even in the worst cases time has been gained in which the regenerative processes may have begun to assert themselves, or during which the preparations for the transfusion of blood may be made, and besides the high arterial pressure in itself, has, it is thought, a directly beneficial influence. Kronecker and Sander affirm that in dogs who have suffered from what experience has shown to be an otherwise invariably fatal hæmorrhage, life may be saved with certainty by thus injecting an alkaline salt solution; still, we must wait for more extensive observations before we can accept this statement as the rule. I certainly would not rely on it where human life was in the balance, but would recommend that in those threatening cases where, owing to human blood not being obtainable, salt solution was injected, the operation be followed as soon as practicable by a transfusion of blood.

[1] This, and other experiments were made before the class.

ORIGINAL ARTICLES.

SUPPURATIVE HEPATITIS.

EVACUATION OF A LARGE ABSCESS.

BY RICHARD McSHERRY, M.D.,

PROFESSOR OF PRINCIPLES AND PRACTICE OF MEDICINE, UNIVERSITY OF MARYLAND.

W. E. P., a bricklayer, æt. thirty-five years, presented himself at my clinic, among other patients, about the middle of October, 1881. His general appearance was cachectic and miserable; he had a poor appetite and irregular bowels, with loose dejections; was in a state of physical and mental distress, unable to work, and despondent, apparently without hope of improvement.

His obvious trouble was a tumor extending from the right hypochondrium over the epigastric region, and bulging largely under the xiphoid cartilage. He had been working during the summer along a watercourse, and had suffered with rigors or irregular chills, which may have been malarious or suppurative. He had no fever when he presented himself for treatment. A diagnosis was made of liver disease, but the form was left for further observation. He was put, for the time being, on small doses of nitro-muriatic acid, and hot fomentations of the same, in water, were directed to be applied over the seat of the disease. After being on this treatment for a week, he returned, and reported himself as feeling better. The tumor was not so firm to the touch as at the first examination, indeed, there was appreciable fluctuation, and it appeared pretty certain that we had either cyst or abscess to deal with.

I then directed his transfer from the University Dispensary to the University Hospital for operation and treatment. When he entered the hospital, he was suffering from dyspnœa and slight cough, pain in hypogastrium and right hypochondrium; urine bile tinted, not albuminous.

When placed on the operating-table (October 31), I made a tentative exploration of the tumor with a hypodermic syringe, and withdrew some pus. Immediately thereafter I used the aspirator, the tube being carbolized, as was that of the syringe, and drew off, being kindly assisted by my friend, Prof. William T. Howard, *eighty-five ounces* (85 oz.), of

pus, the last portions of which were somewhat blood-stained. There was nothing offensive in the character of the pus. I referred it to Dr. R. B. Morison, of the dispensary staff, for chemical and microscopical examination, who found some bile present, but did not discover liver cells in any portion examined.

When the tube was withdrawn, the puncture was sealed with collodion, covered with adhesive plaster, and a compress of oakum; and a broad bandage was so applied around the chest and abdomen as to make the lacerated parts within approach as nearly as possible.

Perfect rest was enjoined, a simple but sufficient diet, and the first medicine was the deodorized tincture of opium in doses of gtt. xxx., to be repeated, p. r. n., for relief of pain.

On the 2d of November, there was much distress from flatulence, with limited ascites, when I ordered ℞. Tinct. Camph., ʒij.; Glycerine, ʒvj.; Acid Carbolic, gr. iv. ♏.; S., ʒij. td., and Pulv. Doveri, gr. x., *hora somni.*

On the 7th, complaint of malaise, and general depression, rather than obvious changes, led me to think pyæmia might be impending, when I directed ℞. Acid Tannic, gr. v.; Spt. Frumenti, ℥j., td., in addition to other remedies, and a conditional injection of Magendie's solution (♏viij.), hypodermically.

So far pulse, temperature, and respiration had been comparatively little disturbed. On the 8th, 9th, 10th, and 11th days after the operation the temperature went up from 99° Fahr., to 101°, 102°, and 102.2° Fahr., the pulse beats from 90–95 to 112, and respiration from 20 to 30 per minute.

This change was rather ominous, occurring as it did just about the time that such change had so often indicated or preceded a fatal issue.

I then changed from tannic acid to sulph. cinchonia (gr. x. td.), and carbolic acid in larger doses, as follows: ℞. Acid Carbolic, gr. iiss.; Glycerine, ℥j.; Tinct. Hyos., ʒj., ♏. four times a day with the cinchonia and the Dover's powder at bedtime. For the relief of obtuse but persistent pain in right hypochondrium, a Burgundy pitch plaster was directed, which gave some relief.

Under this course of treatment the febrile symptoms steadily and rapidly abated.

Thereafter the cinchonia was reduced to gr. v. td., and brown mixture and cod-liver oil were given for cough, with gr. j. only with each dose of carbolic acid.

For some fugitive pains about the person, frictions were made with vol. liniment.

The pulse, the temperature, and respiration came down on the thirteenth day after the operation, from which time there were but slight variations from the normal standard.

On the thirtieth day after the operation the patient left the hospital in good spirits and in better health than he had been for many months. He was anxious to go to work, but I advised him to rest at home for a time, and to report himself occasionally at the hospital. He came as directed, in about a week, in good condition, and I have since learned that he had gone to work at his trade.

Two factors in the treatment seem worthy of special attention. First, the compression made to approximate the walls of the evacuated abscess, for, as Hilton says (*Rest and Pain*), "the ulterior object (of opening an abscess) is to permit and secure coaptation of the internal surfaces of the abscess, to give to its internal surfaces rest, so as to permit of their union, and further rest for the purpose of consolidating the medium of union."

The bandage was applied over the oakum compress, so as to approximate and support the parts to the utmost degree practicable.

The other important factor was the combined agency of the cinchonia and the carbolic acid, of which the patient had for some days, ten grains *per diem.* Upon the adoption of this course the alarming rise of fever was soon abated, and there was a steady progress to complete recovery.

Abscess of the liver, perhaps, occurs more frequently than we are apt to suppose, in this region, for, no doubt, from obscurity of symptoms and limited development, it is often overlooked.

In the summer of 1879 I was called in consultation to see a lady with a great fluctuating tumor in the right hypochondrium, extending downwards towards the crest of the ilium. She was rather sallow than jaundiced; stomach intensely irritable; bowels inclined to be loose, and withal so prostrate and suffering, that when I first saw her death appeared to be imminent. I learned that some weeks previously she had been treated for "chills and fevers" with calomel and quinia, but as the tumor appeared and grew, and her illness increased, she changed her medical attendant. She said she had had liver disease, with intense pain (biliary calculi?), two years previously when visiting relatives in Germany, for which she was treated in that country.

Besides the tumidity, there was a good deal of œdema and redness in the integuments, and fluctuation of fluid, to the touch, with an evident admixture of gas. She declared she would feel a great deal better if "she was cut open," and actually requested it, be the result what it might.

After a little conference it was agreed between Dr. Irons, the attending physician, and myself, that an incision should be made partially through the parieties, to be dressed with lint, which would give us time for subsequent procedures, besides inviting the matter towards the surface. The doctor made but a light touch, under my observation, when immediately a bubble of gas escaped. In the course of a few hours there commenced to run a dark, offensive, purulent fluid, containing shreds, and occasional gas bubbles. Any further incision or puncture was thus anticipated. The lady, on the next morning, though exceedingly prostrate, expressed herself as greatly relieved. Adhesive inflammation had taken place between the abscess and the abdominal parieties, and the slight touch of the scalpel proved to be a sufficient operation. Oakum and carbolic-acid dressings were sedulously used, and carbolized tents. No injections were made, nor was any drainage-tube deemed necessary. The patient was sustained for a time principally by tonics and enemata, until the stomach became tolerant of food.

Hypodermic injections had been previously used (of quinia and morphia, p. r. n.), but they were no longer needed.

I left the city for my summer vacation, and did not see the lady again for some time; but upon my return, I found that the abscess had been pretty thoroughly evacuated, and the patient fairly convalescent. I saw her, some months ago, in very good health. Whether the gas which issued was due to fetid decomposition alone, or to some little perforation which had admitted air from some of the mucous passages, is more, I think, than could be satisfactorily determined by anything short of an autopsy, the *ultima ratio* of pathologists.

Some years ago a seaman, in the University Hospital, had indications of serious hepatic disease, which found relief in the disgorgement of pus, having the taste of bile, through the bronchial tubes. He passed from under my care convalescent. I heard nothing of his subsequent history.

I am not proposing, in this paper, to offer a treatise on hepatic abscess, but merely to report a case where there was a very extraordinary amount of pus taken off with so satisfactory a result. Among records one may find that pus may exist in the liver in quantities ranging from an ounce, or less, to ninety ounces, or even a gallon, or more; but instances of such enormous quantities have only been recorded, I believe, from *post-mortem* examinations.

Allow me to conclude with a few words not bearing directly upon my subject, but still not altogether uninteresting in this connection. I turned rather out of curiosity than in hope of information, in looking up authorities, to a French *Dictionnaire de Médecine*, of the last century, in my possession, to get the views of the learned author in regard to abscess of the liver. He ignored the malady, but in his definition of the liver he gave some points not to be derived from Ainsworth nor Dunglison. *Jecur*, he says, means *juxta cor*, that is, near the stomach, which the ancients called *cor*. He also informs us why the French call this organ *le foie*, "parceque, suivant le sentiment des anciens, c'est le foyer ou la cuisine où se cuit et se prépare le sang."

The *foyer* in the cases just cited failed in its supposed function, inasmuch as it only prepared or presented white or pus corpuscles in great excess, more or less vitiated.

MALIGNANT GROWTH, PROBABLY OSTEO-SARCOMA, OF THE ORBITAL WALLS,

INVOLVING ALL THE BONES OF THE FACE AND BASE OF THE SKULL, BUT MAINLY THE SPHENOID AND ETHMOID—BILATERAL EXOPHTHALMOS—GROWTH IN THE NASO-PHARYNX AND MAXILLARY SINUS.

BY CHARLES STEDMAN BULL, A.M., M.D.,
OF NEW YORK.

R. M., æt. thirty-eight, first seen January 12, 1880. The patient was a tall, robust man, who said that the first symptom of any trouble had been a protrusion of the right eye five years before, and that about five months later the left eye also began to protrude; and the exophthalmos slowly increased without there having been at any time any pain. There was no other symptom until a year ago, when vision began to fail in both eyes, and has steadily grown worse. During about the same period, also, he noticed that his breathing became somewhat difficult, especially when his mouth was closed; and for the last two months he had not been able to breathe through his nose at all. There have been no head symptoms at any time. An examination demonstrated that the exophthalmos was directly forward in the horizontal plane, and the eyes resisted pressure backwards somewhat firmly, and the movements of the eyes were somewhat limited in all directions. The lids could be closed over the eyes with some little effort, but there was no chemosis and no infiltration of the conjunctiva. The media were clear, the pupils normal in size and reaction, the retinal veins in both eyes were engorged, distorted, and pulsating, but there was no change in the optic disks that could be regarded as pathological. Vision in the right eye was $\frac{7}{100}$, and in the left eye, perception of light. There was some slight, ill-defined limitation of the field in the right eye. The urine was examined, but nothing abnormal was found. The heart's action was very rapid, one hundred beats to the minute, and there was a slight obstructive murmur at the base with the first sound. On February 23, vision had sunk in the right eye to $\frac{3}{100}$, the temporal halves of both disks were distinctly discolored, having assumed a white hue; the exophthalmos was more marked, and the eyes now slightly diverged. When direct pressure was made upon the eyes backwards, there was considerable pain produced in the orbits, and the resistance was very firm. The movements of the eyes were markedly limited in all directions. At this visit a very thorough examination was made of the maxillary sinuses and naso-pharyngeal space. The floor of both orbits was pushed upward as if by a growth within the antrum, this being more marked in the left orbit. The posterior nares were blocked by a growth extending entirely across the openings, and separating the nares from the pharynx. This growth could be felt at the vault of the pharynx, and apparently involved also the region near the pharyngeal orifice of the right Eustachian tube. It was hard, had a slightly lobulated surface, was sensitive on pressure, and bled somewhat easily. The right anterior naris was filled by a growth which came forward nearly to the orifice, and appeared to extend from the external wall of the lower and middle meatus. It pushed the septum and turbinated bone over to the left side, but, by slow and careful manipulation, a small probe could be passed along the floor of the nose until it struck the posterior nasal growth. The neoplasm in the nose was soft and very vascular, and a portion of it was removed for examination. It was the opinion of the writer that the case was one of malignant growth of the bones of the face and orbit, probably of the class of osteo-sarcoma, and probably proceeding from the periosteum of the sphenoid and ethmoid bones, and involving the superior maxillary and turbinated bones. The growth filled both maxillary sinuses, all the three meatus of the nose on the right side, and, probably, the superior meatus on the left side. The lower meatus on the left side

was obliterated by the septum being pushed against the outer wall. It was the opinion of Dr. Henry B. Sands, who kindly saw the case for me, that the growth in the nares proceeded from the one in the antrum rather than by direct prolongation from the posterior nares. He thought that the neoplasm occupied not only most of the deep cavities and sinuses in the bones of the face, but also all of the communicating cellular spaces of the cranial and facial bones; and this was undoubtedly correct. The rapidity of such a growth is very much increased in bony tissue, after it has reached the cellular spaces of such bones as the sphenoid and ethmoid. It is not at all improbable that the growth in this case extended into the frontal sinuses from the superior nasal meatus, as the progress had been very rapid in the six weeks that intervened between the two visits, and of late the patient had complained of constant frontal headache. The portion of the growth removed from the nose for examination proved to be of a mixed character. Its tissue was largely myxomatous, but there were large numbers of fusiform cells, and quite a number of giant cells, or myeloplaxes, while the development of bloodvessels was enormous. The case was not deemed a fit one for operative interference, and this decision was communicated to the patient, who was discharged, and has not since been heard of.

These cases of primary osteo-sarcoma of the bones at the base of the skull are comparatively rare. The chief danger lies in the prolongation of the tumor into the intra-cranial cavity, which may occur in various ways, either from the orbital cavity backward along the optic nerve through the optic foramen; or by destruction of the bones by carious ostitis, leading to meningitis and encephalitis; or by dissemination of the morbid growth itself through minute bony channels. Osteo-sarcomata which begin in the cavity of the skull, in the ethmoid cells, in the naso-pharynx, in the spheno-palatine fossa, or in the frontal or maxillary sinus, all tend to involve the orbital walls, and eventually to extend into the orbital cavity itself. In this latter stage, care must be taken to avoid confounding these cases with those of primary orbital tumors, in which the prognosis is by no means so grave, while they also admit of successive operative removal. In the class of tumors represented by the above detailed case, the participation of the orbital walls is only one phase of the widely extended disease of other cranial bones. It is doubtful if the primary growth ever begins in the orbital walls themselves. The wide extent of the disease, its malignant character and often rapid growth, are strong counter-indications against any operative measures. This decision is strengthened by the results, proximate and remote, of such operations as have been undertaken. In almost all instances, the growth has been found to involve the bones of the face and base of the skull beyond the limits of the operator's knife, and the operation has only increased the rapidity of the growth. In similar desperate cases where the superior maxilla has been exsected, in whole or in part, the patient has died within a short period, either from shock or from secondary hæmorrhage; and in the opinion of the writer, all such operations in cases of this class are strongly to be deprecated.

A CASE OF MORPHIA POISONING

TREATED SUCCESSFULLY BY LARGE DOSES OF ATROPIA.

BY J. H. SMITH, M.D.,
OF DALLAS, TEXAS.

I WAS called at three o'clock on the morning of February 17, to see E. M., a variety actress, who had taken fifty cents worth of sulphate of morphia. I did not see her until two hours after she had taken the drug, and upon my arrival I found her in a state of profound insensibility; breathing, stertorous; pulse, slow and feeble; pupils, insensible to the action of light, and contracted to a pin-point in size. I succeeded in slightly arousing her, and managed to partially empty her stomach by emetics; but she again became insensible, and I, not knowing how many grains of morphia she had taken, concluded to give her the benefit of sulphate of atropia hypodermically. Having lost a similar case last summer, in which I was satisfied afterwards that I did not use the atropia in sufficiently large doses, I determined to give it heroically. I was satisfied it was my only main hope, so I commenced with one-twelfth-grain doses. I gave the first immediately after my arrival; the second in half an hour; and the third, fourth, and fifth (I only gave five doses) at intervals up to ten o'clock A.M. I had very little hope of saving her; but, by working all day, using flagellations, severe shakings, and hot applications to the feet and limbs, she began to show signs of returning life at about five o'clock P.M.; and at seven P.M., I considered her out of danger. I would here state that her respirations became as slow as barely two per minute at times, but never going beyond eight until she began to recover. I report this case merely to show the large doses of sulphate of atropia used, the total amount being $\frac{5}{12}$, or nearly one-half of a grain. I learned afterwards that fifty cents would purchase fifteen or twenty grains of sulphate of morphia. I do not know the exact amount of atropia required to counteract a given amount of opium, but I am inclined to believe that our only guide in the use of atropia in opium-poisoning is to watch its physiological effects. The patient made a good recovery from the effects of the opium, and is well now, with the exception of a burn on the right foot from a hot hand-iron, which, in the natural excitement of the moment, was allowed too close contact with her foot, producing a burn of the third degree, and for which I am now treating her.

REPORT OF A CASE OF LITHOTRITY,

WITH SUBSEQUENT LITHOTOMY, FOLLOWED BY IMMEDIATE UNION THROUGHOUT THE ENTIRE INCISION.

BY A. W. MCCOY, M.D.,
OF PHILADELPHIA.

DURING the latter part of October, 1881, there came under my care William A. McE., æt. twenty-one, native of this city, who had been a great sufferer from vesical irritation for a long period.

During his childhood he had incontinence of urine at night, which continued for several years. At the age of thirteen he passed a small calculus, which became arrested at the meatus, and was removed by the family physician. The stone was of dark-brown color, smooth surface, and about the size of a cherry-stone.

Since that time his health has been good. He had no symptoms of vesical irritation until three years ago, when he began to have pain (which was only momentary, however,) at the end of his penis after the act of urination. This condition continued, with slowly increasing pain after passing water, until in July, 1881, when his distress greatly increased, not only after urinating, but also upon exercising. His suffering increased throughout the summer, and, at the time he came under my care, he was scarcely able to be out of bed. On my second visit his bladder was sounded for stone with a Thompson searcher, and a calculus readily felt. A few days subsequently, the diagnosis was confirmed by Dr. D. Hayes Agnew.

The following week lithotrity was performed by Dr. Agnew, and a portion of the stone successfully crushed. It proved to be very hard (as was surmised by a previous examination of the urine). Although all the force justifiable was used, the remaining portion could not be crushed. The operation caused no disturbance, and the fragments were passed from the viscus with but little discomfort. Two weeks after the crushing, lateral lithotomy was performed successfully by Dr. Agnew.

A very jagged, dark-brown oxalate-of-lime calculus, weighing one hundred and twenty-two grains, was removed. The stone had been broken in half at the crushing operation. The portion removed was the remaining half. The bladder was well washed out, and the patient put to bed. Five hours after the operation there was considerable traumatic fever, and some little pain in the bladder was complained of. Fourteen hours after the operation urine was passed through the urethra, none escaping through the wound at this nor any subsequent time during the entire convalescence. The fever gradually subsided, and in a few days the pulse was normal.

The wound became completely agglutinated after the operation, and showed no swelling or redness at any time, and on the fourth day appeared entirely healed. The condition of the patient seemed to be normal, with the exception of a slight pain felt on evacuating the bladder. He passed his urine in a full-sized stream with good force, and retained it easily from six to eight hours.

On the ninth day urine was voided without pain. About this time his right epididymis became tender and swollen, and involved the testis. This complication readily yielded to treatment and gave but little trouble.

From this time on the subject did well, although kept in bed three weeks, as a precautionary measure against accident. So far as the operation and wound were concerned, he might have been released much earlier.

Few cases are on record of union by first intention[1] in operations for stone, so rare is it, that it has become the rule among surgeons not to expect or make special effort to obtain such a result. It is probable that with more attention to possibilities of such success, in cases of lithotomy, this result might more frequently become the experience of surgeons.

HOSPITAL NOTES.

MONTREAL GENERAL HOSPITAL.

(Service of PROF. RODDICK.)

TWO CASES OF PEMPHIGUS TREATED WITH ARSENIC.

(Reported by MR. B. W. BURLAND and CLARENDON RUTHERFORD, M.A.)

CASE I.—J. C., æt. thirty-one, a stout, well-nourished Englishman, butcher on board a steamship, was admitted to hospital, November 9, 1881, with acute general pemphigus. Has been a healthy man; has had gonorrhœa, but never syphilis. About three months ago was pricked with a fish-bone in the index finger of the right hand, and this remained sore, painful, and discharged at times until three weeks ago. Present attack began November 4, when the patient noticed, on awaking, soreness of the eyelids, and a pimple on the bridge of the nose. In the evening there were additional pimples about the alæ nasi, and the lips became red and sore. The next morning there was a free discharge from the lids, blebs had formed on the pimples, and they had extended to the neck and scalp.

On admission, four days after the onset, he was weak, temperature 104°, pulse 110. There were bullæ on forehead, neck, chest, back, and extremities; the average size about that of a quarter of a dollar; many had ruptured and others presented excoriated patches; many of those on the lower extremities were hæmorrhagic. The eruption covered the greater part of the back; they were numerous on the scalp, and the hair was much matted with the secretion. Conjunctivæ were inflamed, joints of fingers presented purulent blebs, and the palms of the hands were erythematous. A few vesicles were seen on the inside of the lips and on the tongue. For the first week the eruption increased and the general condition became aggravated. He was placed on a water bed, and had stimulants and iron freely administered. The temperature range was from 101° to 103°, pulse a little over 100. Urine about 40 ozs.; contained sugar; no albumen. On the 16th he was ordered Fowler's solution ♏ v. three times a day. From this date no new spots came out and the man began to recover. The note on the 22d, reads: "Patient improving rapidly and is gaining strength; eyes still sore, but looking better; desquamation taking place on arms and hands; temperature nearly normal; only a few bullæ remain on legs and feet—no new ones."

On 29th, patient got up. No blebs remained, and only a few patches of excoriation on neck and joints. Has diarrhœa and abdominal pain. Arsenic was discontinued to-day. He rapidly gained strength. and on December 13, left the hospital healed with the exception of a scaly condition of the elbows.

CASE II.—T. K., æt. sixty-two, an Englishman, admitted December 27. Had enjoyed good health up to six or seven months before admission, when he began to run down from lack of proper nourishment. Has had gonorrhœa, which was followed by rheumatism (gonorrhœal), and anchylosis of both wrists. No history of syphilis. Has been a hard drinker, and has been much troubled with piles. Present illness began six months

[1] Dudley, of Kentucky, 8 cases in 135 operations; Crichton, of Scotland, 23 cases in 200 operations. (*Vide* Gross on Urinary Organs, 3d ed., p. 275.)

ago in the form of erythematous patches on the flexor surfaces of the arms, which were followed by blebs, varying in size from a split pea to a dime-piece. The thighs then became affected, and later the anterior region of the body and the shoulders. On admission the eruption was chiefly on the lower extremities; the bullæ were large, surrounded by indistinct areolæ, and filled with fluid, which was clear at first, then opaque, and finally yellow. Considerable itching and even pain preceded the eruption of new patches; urine normal. During the first fortnight after admission, several relapses occurred, chiefly on the legs. On January 15, the patient was ordered ♏ v. of Fowler's solution of arsenic three times a day with generous diet. The dose of the arsenic was gradually increased to ♏ x.; a further increase caused gastric irritation, and the drug was discontinued for a few days. Locally, a weak solution of tannin was applied. The effect of the treatment has been most decided; relapses are now (March 1) very infrequent, and in place of large, well-filled bullæ, the eruption has an aborted look. For five or six days no new bullæ have appeared. The general condition of the patient has greatly improved. He continues to take ♏ v. of Fowler's solution three times a day.

Remarks.—The first of these cases of pemphigus is more than usually interesting on account of the very acute symptoms by which it was ushered in. For a time it seemed as if there might be some serious blood contamination. With regard to the wound in the finger —was it concerned in the causation of the disease? Both cases afford excellent illustrations of the marvellous effects of arsenic in many cases of pemphigus. In the acute case the disease seemed to be staggered by the first dose of the solution, and not the faintest attempt at relapse was made. In the second case the effects of the drug have not been so marked, but they have been decided.

MEDICAL PROGRESS.

SOLUTIONS OF ALKALOIDS IN OIL AND GLYCERINE.—At a recent meeting of the Société de Thérapeutique (*Gaz. Hebdom. de Méd.*, Jan. 6, 1882), M. VIGIER pointed out the difference which exists, in a therapeutic point of view, between solutions of alkaloids in oil and in glycerine. It is true that the alkaloids dissolve more readily in glycerine; but as scarcely any of this substance is absorbed by the skin, the preparation obtained is inert. On the contrary, oils dissolve alkaloids by means of the oleic acid in smaller quantity; but, the cutaneous absorption being more considerable, they yield much more manifest results.—*London Med. Record*, Feb., 1882.

THE ANTAGONISM BETWEEN AMYL-NITRITE AND CHLOROFORM.—In this paper Dr. TESTA (*Gaz. Med. Ital.*, Oct. 29 and Nov. 5, 1881), gives the results of forty-four carefully conducted experiments on the action of amyl-nitrite in presence of chloroform in animals. The subjects of the experiments were rabbits, and the experiments themselves are divided into four series of eleven each. In the first series the action of chloroform alone is studied; in the second, the influence on the anæsthetic condition of amyl-nitrite; in the third, the influences of varying doses of chloroform; in the fourth, the influence of the amyl-nitrite on arterial pressure. From these experiments, Dr. Testa concludes that the action of amyl-nitrite is to lower arterial tension, to increase the heart-beats, and to render respiration irregular. He believes that its action in chloroform poisoning is not only useless, but positively pernicious, inasmuch as it intensifies the very risks to which chloroform itself is liable. There is, therefore, no true antagonistic or antidotal action between the two substances.—*London Med. Record*, Feb., 1882.

A MODIFICATION OF PETTENKOFER'S REACTION FOR BILE ACIDS.—Prof. DRECHSEL, of Leipsig, recommends the use of syrupy phosphoric acid, instead of sulphuric acid. Enough phosphoric acid is added to the solution of bile acids, which should be as concentrated as possible, to render the mixture somewhat syrupy, then a little cane sugar is added, and the test-tube warmed by immersion in boiling water. After a short time a beautiful red or violet-purple appears. The advantage of phosphoric acid over sulphuric exists in the fact that the former does not char the cane sugar, so no brown coloration is formed to interfere with the reaction; it also chars to a less extent any other organic impurities which may happen to be present.—*Centralb. f. d. Med. Wissen*, Feb. 25, 1882.

EFFECT OF DRUGS ON THE SECRETION OF MILK.—Dr. MAX STUMPF draws the following conclusions from an elaborate experimental study of the action of drugs on the mammary secretions:

1. Iodide of potassium produces a decided reduction in the quantity of milk secreted.

2. Morphia, alcohol, and lead do not affect the quantity or quality of milk.

3. Salicylic acid appears to increase somewhat the secretion of milk in quantity and in the proportion of sugar.

4. Pilocarpine does not increase milk formation.

5. Iodide of potassium causes [illegible] in the functional activity of the gland, [illegible] consequently, a modification in the composition of the milk.

6. Alcohol and alcoholic drinks increase only the relative amount of fat in the milk, and are, therefore, not be used as a diatetic means of stimulating the gland.

7. Iodine rapidly appears in the milk, and disappears in the woman immediately after stopping the drug; in the herbivora it lasts some time after the cessation of administration of iodine. The quantity of iodine in the milk follows no definite proportion to the amount of the drug administered, but appears to vary according to individual peculiarities; "iodized" milk, therefore, cannot be used as a therapeutic means. Iodine does not exist in the milk as iodide of potassium in solution, but is united with the casein.

8. Alcohol does not pass into the milk in the herbivora.

9. Lead passes in traces when small doses are administered, and persists after the stopping of the drug.

10. Salicylic acid, when given in large doses, can be found in small quantities in the milk; somewhat larger amounts, however, in woman than in the herbivora.—*Deutsche Archiv f. Klin. Med.*, Dec. 18, 1882.

GANGRENE OF THE NOSE AND UPPER LIP.—The rare occurrence of such cases is shown by the remark of Prof. Billroth, that he had never before seen a similar case, and knew only of few cases having been reported. Contrary to the general experience in cases of gangrene occurring in other situations, as in [illegible], the patient present at Billroth's clinic, a man fifty-five years of age, could give no explanation of the cause of the disease. He had had a tertian intermittent years before, and was subject to fainting attacks. After a moderate chill the tip of the nose became black; however, the entire nose and part of the upper lip were destroyed, leaving a granulating ulcer. Syphilis naturally suggested itself, but the man denied ever having been infected, and is the father of four healthy children. Prof. Billroth will attempt to replace the nose and lip by a plastic operation.—*Allgemeine Wien. Med. Zeit.*, Feb. 21, 1882.

Vaginal Ovariotomy.—In the March number of the *New York Medical Journal and Obstetrical Review*, Dr. W. H. Baker, Instructor in Gynecology in Harvard University, relates a case in which he removed a suppurating dermoid cyst of the ovary *per vaginam*, and remarks that the success which now attends ovariotomy by abominal incision renders the cases very few in which removal by the vagina would be the better method. He would limit it: First, to cases where the cysts are small and their contents bland, so that removal can be effected without difficulty, and without great danger of septic peritonitis from the escape of any of the fluid into the peritoneal cavity. Second, to dermoid cysts so small as to be removed through the vaginal incision without evacuation. In the case of an ovarian cyst firmly adherent in the pelvis, he believes the best operation to be that of drainage into the vagina, with subsequent destruction by suppuration or by the cautery.

Poisoning by Chlorate of Potassium.—Ludwig (*Journ. de Pharm. et de Chemie.*, Sept., 1881), having investigated a case of poisoning by this salt, has arrived at the following conclusions: Potassium chlorate appears to act, on the one hand, like phosphorus and arsenic; it is reduced by the blood to the state of potassium chloride, for it can be detected neither in the blood nor in the urine, nor even in the gastric contents; the red corpuscles are destroyed, and other toxic symptoms are developed. On the other hand, the chlorate is decomposed in the kidneys by feebly acid urine into a base and an acid, and the chloric acid thus formed acts in an energetic manner. This singular alleged fact is in opposition to the received views of chemists.—*London Med. Record*, Feb., 1882.

Hypodermic use of Caffeine.—At a recent meet- of the Société de Thérapeutique in Paris (*Gaz. Hebdom. de Méd.*, Jan. 6, 1882), M. Tanret read a paper on this subject. He said that pure caffeine requires ninety-three times its weight of water for complete solution; therefore, up to the present time, it has not been generally employed in subcutaneous injections, one cubic centimetre of the liquid only containing little more than one centigramme of the active principle. The majority of the salts of caffeine proposed with this object, the acetate, valerianate, and lactate, become decomposed, in the presence of water, into free acid and caffeine, which is precipitated in consequence of its low degree of solubility. The salts containing mineral acids, sulphate, hydrochlorate, and hydrobromate, have little stability, and do not offer any advantage. M. Tanret has endeavored to obtain a salt of caffeine by means of the chlorigenic acid which is associated with it in coffee, as Payen has demonstrated; unfortunately, the preparation of this salt is difficult and laborious. Since then, he has had recourse to similar acids, such as benzoic, cinnamic, and salicylic. He has thus been able to obtain double salts of caffeine and soda, having the advantage of being soluble in somewhat larger proportions, and having a constant composition. With double benzoate of caffeine and soda, a solution is prepared, containing twent- centigrammes of alkaloid in a cubic centimetre; the solution of double salicylate contains from twenty-five to thirty centigrammes to the cubic centimetre. The solutions of benzoate and salicylate are generally alkaline, and are neutralized by means of the corresponding acid. These salts, however, have no great stability, for they decompose when the solution is treated with chloroform; and the caffeine, less soluble than the salt itself, is precipitated. M. Vigier believed that is in consequence of an analogous decomposition of salts of narcotine contained in opium, that, by means of chloroform, ether, or turpentine, the so-called free narcotine is obtained. It differs in no respect from the so-called combined narcotine, which is similarly extracted from raw opium during the preparation of morphia. M. Dujardin-Beaumetz had used double benzoate of zoda and caffeine in two cases, one of diphtheria, and the other of choleraic symptoms. He did not find any irritating local action from the solution prepared by M. Tanret for hypodermic injections; but, as to the therapeutic value of the drug, he could not yet form an opinion. M. Féréol asked whether the double salts of caffeine, proposed by M. Tanret, could not be administered by the mouth. M. Tanret replied that he had no other object in preparing so concentrated a solution of caffeine but for subcutaneous injections, but the double salts which he had obtained might be given as a draught. It would be enough to prescribe the dose of caffeine required, and to add to it a sufficient quantity of benzoate or salicylate of soda to obtain the complete solution of the alkaloid. An extemporaneous preparation of the double salt, containing a known dose of caffeine, might thus be easily obtained.—*London Med. Record*, Feb., 1882.

Curability of Locomotor Ataxia. — Schultze (*Arch. f. Psych.*, xii., 1,) had the opportunity of making an autopsy on a patient reported as approximately cured of tabes dorsalis by Erb, in *Ziemssen's Cyclopædia*. This patient had had latency of all symptoms except the patellar reflex destruction, and occasional enuresis, over twelve years, and died by corrosive poisoning. Characteristic posterior spinal sclerosis was found in the following distribution: lumbar region, diffuse degeneration of moderate intensity of posterior columns; dorsal region, degeneration of most external segment (root-zones) of Burdach's columns, partial degeneration of Goll's columns; cervical region, less intense, but more diffuse degeneration of Burdach's columns, and slight involvement of the columns of Goll; pyelitis and cystitis were the only other noteworthy lesions. In conclusion, the author polemicizes very properly against the nerve-stretching therapeusis, and suggests as a more legitimate field for the surgical neuro-therapeutist—it is difficult to say whether satirically or otherwise—stretching the optic nerve.—*Amer. Journ. of Neur. and Psy.*, Feb., 1882.

Epidemic of Ecthyma in a Small-Pox Ward.—M. Du Castel (*Journ. de Méd. et de Chirg. Prat.*, December, 1881) observed this complication in the patients in the small-pox wards under his care at the Saint Antony Hospital. The ecthyma supervened either during the stage of desiccation or even that of suppuration. The ecthymatic eruption, sometimes discrete, sometimes confluent, chiefly occupied the anterior surface of the chest and the upper or lower limbs. It was also seen on the face; generally it showed itself in successive eruptions, sometimes preserving a mild character, sometimes, on the contrary, terminating in death. For a long time the men of the ward only showed numerous cases of ecthyma, but a majority of the convalescents were attacked by it. It was only after several months that the disease broke out in the women's ward, where it broke out with the same intensity. Before acknowledging its contagious nature, M. Du Castel waited for the development of the disease in other wards; but the isolation of the small-pox patients scarcely allowed contact with other wards. Nevertheless, the house-surgeon of the ward and a male nurse were attacked by ecthyma, localized in the one in the hand, and in the other in the feet, and probably produced by direct contact with the patients. His own and M. Vidal's experience has well-demonstrated that ecthyma is inoculable. But it may be said in connection with inoculable ecthyma, that there is no doubt ecthyma may be contagious and epidemic; this variety would be so much the more important to recognize, because, when it finds a

soil appropriate for its implanting, such as convalescent small-pox patients, it may become a serious and even mortal affection. The local treatment consisted in lotions of carbolized oil on the face, and lotions of mercurial sublimate over the rest of the body.—*London Med. Record*, Feb., 1882.

A SIMPLE TEST FOR ALKALOIDS IN THE URINE.—A very simple test for determining the presence of any vegetable alkaloid in the urine, which has been given therapeutically, is one originating with Prof. Bouchardat, of Paris. It consists in dissolving *one part* of iodine and *one part* of iodide of potassium in *fifty parts* of distilled water. When this solution is added to urine which contains sulphate of quinia or other vegetable alkaloid it forms a chestnut-colored precipitate.—*Pacific Med. and Sur. Journ.*, Feb., 1882.

ACTION OF THE MYDRIATICS.—The comparative effect of duboisine and homatropine on the eye have been investigated by SCHÆFFER (*Archiv für Ophthal.*, vol. x., p. 196; *Gaz. Hebd. de Méd.*, January 13, 1882, p. 28). In man, the effect on the pupil of atropine locally applied was to cause mydriasis in fourteen or fifteen minutes, persisting to the fourth day. Duboisine produced dilatation in six or eight minutes, lasting about four days. Homatropine induced dilatation in nine minutes, but it lasted only three hours. As regards accommodation, this was influenced more rapidly (in ten minutes) with duboisine than with atropine (twenty-three minutes). The maximum of intensity was reached in an hour and a half after dilatation by duboisine, and in the same time with homatropine. It disappeared, however, more quickly with homatropine than with the other two alkaloids. Therapeutically, where a temporary effect only is required, homatropine may prove more serviceable than atropine or duboisine.—*London Med. Record*, Feb., 1882.

IODOFORM INSUFFLATIONS IN LARYNGEAL PHTHISIS.—BEETZ (*Berl. Klin. Woch.*, No. 2, 1882) gives details as to his method of applying this remedy. Iodoform, finely powdered by rubbing up with ether, may be applied to the larynx by insufflation with so little irritation that the morphia at first added can very quickly be omitted. The amount used, 30 grains daily, in three or four applications, is not enough to cause toxic symptoms. To prevent, as far as possible, annoyance from the odor of the remedy, an inhalation of carbolic acid solution may be given before the insufflation; a proceeding which will also allow the more direct application of the remedy to the ulcerated surface, although Dr. Beetz has found the iodoform alone to succeed admirably.—*London Med. Record*, Feb., 1882.

CEREBRO-SPINAL MENINGITIS, FOLLOWED BY DISTURBANCES OF HEARING AND EQUILIBRIUM.—From an interesting review of this question by MOOS, we learn that of sixty-four cases of recovery from cerebro-spinal meningitis, which showed disturbance of hearing as a sequel, exactly one-half manifested, in addition, a more or less disordered equilibrium. Of the thirty-two cases exhibiting the latter symptom, twenty-nine were totally deaf on both sides, two totally deaf on one, and hard of hearing on the other side, and one case had merely impaired hearing bilaterally. The disturbance of locomotion had existed for periods varying from three weeks to five years after the inception of the disease, and was chiefly characterized by a staggering gait, which in children approximated the waddle of a duck. The remarkable feature was that the disorder disappeared if the patients (usually children) were well supported, and that its intensity was greatest in those children who had not practised walking long before being attacked by the febrile affection. After an ingenious process of argumentation, the following conclusions are formulated: 1, the centre for the sense of the equilibrium is in the cerebellum; 2, the nerve-end apparatus in the ampullar crista, and, perhaps, of the sacculus, is in combination with this centre by means of nervous channels; 3, disease or irritation of the end-apparatus or of the neighboring structures is competent to produce the same symptoms as disease or irritation of the centre itself: this applies particularly to the symptom of vertigo; 4, unilateral labyrinthine affections, no matter whether they have primarily originated in the labyrinth or have extended thither from the skull-cavity, may manifest themselves by vertigo; 5, should the opposite labyrinth become involved in the same patient, this complication is also inaugurated by a (fresh) vertigo, soon to be followed by staggering gait; 6, sudden unilateral paralysis of the ampullary nerves does not produce vertigo, etc.; 7, the same, as a rule, applies to destruction of the nervous end-apparatus of the vestibular system, following chronic disease-processes; 8, bilateral, acutely produced hæmorrhagic or suppurative inflammation of the nerve end-apparatus of the ampullæ, with permanent paralysis, especially when following cerebro-spinal meningitis, causes staggering gait, whose severity is proportionate to the youth of the patient, and which is most intense and of longest duration when visual disturbance coexists. As soon as the muscular and visual senses are sufficiently practised, they vicariate, and the staggering gait disappears.—*Amer. Journ. of Neur. and Psy.*, Feb., 1882.

THE ACTION AND USES OF ASPIDOSPERMINE.—Dr. GUTMANN records (*Archiv für Experim. Pathol. und Pharmakol.*, Heft vi., p. 451) experiments with several preparations of this substance, the alkaloid of white quebracho bark. Four of these preparations were citrates, the fifth was the simple alkaloid. In frogs, the subcutaneous injection of 1-30th grain of the alkaloid caused distinct loss of voluntary power in the extremities, especially the posterior, going on to complete paralysis. The reflex action was less affected. To ascertain whether the effect was produced through the intramuscular terminations of the motor nerves, through the muscles, or through the central system, the common iliac artery and vein were tied; when it was found that the paralysis still followed, while also it was shown that muscular contractility was not diminished to direct faradic stimulation. The respiration was much retarded, probably the result of direct action on the respiratory centre, and ceased when paralysis was complete. The pulse sank from 38 to 15 in the half minute, a reduction which, it was shown by control experiments, was not due to the operation requisite for laying bare the heart. This result taking place in previously curarized frogs, Dr. Gutmann considers due, not to the action of the vagus, but to paralysis of the automatic cardiac ganglia. In rabbits, the respiration was not primarily affected, but the action on the heart was constant and characteristic, the pulsations sinking from 70 to 55 or 50 in the half minute. The temperature also fell, within an hour, 2° to 2.7° Cent. (3.6° to 4.8° Fahr.). Section of the vagi caused no increase in the frequency of the heart's beat. Sensation and motion were unaffected till death was near. Dr. Gutmann would, therefore, recommend aspidospermine in cases of cardiac neuroses and as an antipyretic, for which last purpose cortex quebracho is used by the physicians of the Argentine Republic, where it is native. Dr. Gutmann calculates the minimum dose for an adult man as 18 grains. In a case of hemiepilepsy, by means of it he reduced the pulse from 80 to 60 per minute.—*London Med. Record*, Feb., 1882.

Action of Hyoscine.—Following up his experiments on the action of hyoscyamine, Dr. Gnauck has sought to determine the action of hyoscine, one of the elements of hyoscyamine (*Centralb. für die Med. Wissen.*, No. 45, 1881). His experiments were mainly performed on healthy individuals and on patients affected with nervous diseases. Commencing with small doses of iodide of hyoscine in healthy individuals, he found that hyoscine is tenfold stronger in its effects than hyoscyamine, approaching thus more nearly to atropine. The effects observed were cerebral oppression, vertigo, glimmering before the eyes, feeling of intoxication, thirst, nausea, acid taste, itching of skin and a feeling of heat, labored and retarded respiration, reddening of the face, dilatation of the pupils, unsteadiness of gait and delirium—that is, the same symptoms as those from atropine and hyoscyamine, also exhaustion and sleep, as with hyoscyamine. In addition, however, there was also a retardation of the pulse even with large doses—a result not seen with atropine and hyoscyamine. This last symptom varied with the amount of the dose and the susceptibility of the individual. Even a very minute dose (1-600 grain) of hyoscine invariably produces some of its effects, and subcutaneously twice as powerfully as by the mouth. The interval elapsing is usually from two to twelve minutes, or slightly longer by the mouth, and the effect is very various in different individuals. The fall in the pulse is the first symptom to appear, the last to disappear, ranging from eight to twenty beats. A slight reduction of the pulse appears in the beginning of the action of atropine and hyoscyamine, and with small doses; but this is quickly followed by paralysis of the terminal filaments of the vagus. Hyoscine probably causes the fall in the pulse by an irritation of these filaments; tropaic acid, the other element in hyoscyamine, therefore, having the power to alter its action. Dr. Gnauck promises to detail, at a future time, the results of experiments on patients affected with mental diseases.—*London Med. Record*, Feb., 1882.

Carbolic Acid Poisoning.—Dr. Archer reports a case of poisoning with a wine-glassful of crude carbolic acid in a woman forty years of age, from which he draws some important conclusions. The treatment mainly consisted of large draughts of olive oil, and in hypodermic injection of forty minims of ether, recovery taking place. He concludes:

1. That the nervous centres are profoundly affected shortly after the reception of the poison into the stomach.

2. That a large dose of the poison, when concentrated, may be protective as regards the final result, by rendering the mucous membrane of the stomach non-absorbent.

3. That a moderate dose, considerably diluted, may prove fatal, the gastric mucous membrane retaining its absorptive powers.

4. That when the dose is concentrated, the introduction of stimulants into the stomach is not likely to be of any use, but stimulants used subcutaneously may prove beneficial in bringing about reaction.

5. That no permanent injury follows as a necessary consequence from a concentrated dose.—*Liverpool Med. Chir. Journ.*, Jan., 1882.

A similar case is reported by Dr. Cornick of a man who took two or three drachms of carbolic acid with suicidal intent. Recovery took place under the administration of saccharated lime-water. Dr. Cornick alludes to the following points as worthy of notice:

1. The rapidity with which the poison overwhelmed the system to complete insensibility, and the production of general muscular spasm, tonic in character, occurring fifteen minutes after the administration of the poison; and

2. The speedy and complete efficacy of the saccharated lime-water as an antidote; nothing else having been given until the patient was so far recovered as to suggest himself another and a different antidote; and no appreciable quantity of the poison having been removed by vomiting and purging.—*Nashville Journ. of Med. and Surg.*, March, 1882.

Traumatic Tetanus treated with Eserine.—Dr. Thomas Layton reports a case of tetanus occurring in a boy, aged eleven years, following, after an interval of three weeks, the wounding of the sole of the foot with a splinter. Chloral, bromide of potassium, and cannabis indica were employed without benefit. Eserine was then administered in doses of $\frac{1}{64}$ grain every hour. Recovery took place. Dr. Layton calls attention to the following points:

1. The child took a *full adult dose* of the sulphate of eserine every hour for several days, and not only were there at no time symptoms of poisoning, but the beneficial action of the remedy was apparently manifest.

2. There was never the least *contraction* of the pupils—on two occasions, as mentioned in the observation, the pupils were *dilated*, at all other times they responded to light in a normal manner.

3. It was not noticed that the sulphate of eserine increased either the secretion of tears and saliva, or defecation; with regard to the last, an occasional purgative had to be employed during the progress of the case.—*New Orleans Med. Journ.*, March, 1882.

Herniotomy in Simulated Hernia.—Dr. Lodovico Corazzi describes, in the *Gaz. Med. Italiana*, Nov. 12, 1881, the case of a woman, aged sixty-three, who, before coming under his care, had already, for fourteen years, been the subject of an inguinal hernia on the right side. Without any apparent cause, this suddenly exhibited signs of strangulation, which did not decrease even after the hernia had apparently been reduced by taxis. The sac was, therefore, opened; but, even after this, reduction could not be effected. Uncertain whether or not he had reached the intestine, Dr. Corazzi continued his incisions, with the final result of giving exit to a quantity of fluid and gas. These he took to be the contents of the intestine itself, which he supposed he had wounded; and further operative interference was, therefore, desisted from. The necropsy, made a few hours after death, revealed, instead of strangulation, a perforation of the small intestine about two yards above the ileo-cæcal valve. The contents had become extravasated in the abdominal cavity. Thus, what was supposed during the operation to be intestine, was really the sac; the fluid and the gas it contained were derived, the one from a peritoneal exudation, the other from the intestine itself, which had ruptured much higher up at the seat of an ulcer. A correct diagnosis in such a case was almost an impossibility. There would really seem to have been no strangulation whatever; all the patient's symptoms having been directly due to perforation and consequent peritonitis. The simultaneous existence of a hernia was merely an accident, which, however, from its nature, was calculated to induce an error of diagnosis.—*London Med. Record*, Feb., 1882.

Treatment of Rupture of the Bladder and Urethra by External Urethrotomy.—The patient, whose case is reported by Dr. Sacerdoti in the *Gaz. Med. Italiana Prov. Venete*, Nov. 19, was a boy aged thirteen, who fell across a beam of wood, striking, in the first instance, his perineum. When seen, the objective symptoms were great discoloration over the inguinal, scrotal, and perineal regions, a wound on the inner and upper portion of the left thigh, and a globular tumor in the suprapubic region. No urine could be passed, though the desire to do so was very great. On pressing the tumor, urine could be made to flow out of the wound

in the thigh; but following up the track most carefully, the author could not, nevertheless, reach the bladder, nor could he enter it *per urethram*. Taking these and other symptoms into consideration, he believed he was in presence of a case of ruptured urethra and bladder, with extensive extravasation of urine. He, therefore, performed external urethrotomy, introducing, on the second day, a catheter to draw off the urine as secreted. On the eighth day, an abscess opened at the seat of the wound in the thigh, but gradually all adverse symptoms disappeared, and two months after the operation the urethral fistula had healed, and the patient was discharged completely cured. Antiseptic treatment was adopted throughout.—*London Med. Record*, Feb., 1882.

PHYSIOLOGY OF DEGLUTITION.—KRONECKER and MELTZER have arrived at the following results in regard to the act of deglutition. In normal swallowing the mass is injected through the œsophagus into the stomach before peristalsis can be of value.

1. Every act of swallowing excites not only the corresponding contraction of the œsophagus, but inhibits at the same time the previously called-out but not yet manifest contraction of a previous act of deglutition.

2. The second motor irritation is active when the first ensuing movement is over.

3. When the whole glosso-pharyngeal nerve is excited, then no act of deglutition ensues. This is seen in dogs, not in rabbits.

4. When the pharyngeal branch of the glosso-pharyngeal is separately excited, then the inhibition takes place in the throat and chest part of the œsophagus. This result is obtained by experiments on dogs.

5. When the glosso-pharyngeal nerve is divided, then the œsophagus falls into a tonic cramp which can last more than a day. It is not difficult in rabbits to show the inhibitory action of the glosso-pharyngeus upon the taking place of the act of deglutition. When the superior laryngeal nerves are irritated electrically a swallowing movement is called out, and about one second after this, the elevation of the larynx ensues, and on the bared cervical part of the œsophagus a contraction takes place. If now, immediately after the elevation of the larynx, which indicates the first part of the act, the glosso-pharyngei are tetanized for a short period, the contraction of the œsophagus does not take place. —*Journ. of Nervous and Mental Diseases*, Jan., 1882.

A NEW METHOD OF PERFORMING THE CÆSAREAN OPERATION.—Dr. FRANK (*Centralb. f. Gynäk.*, December 10, 1881), thinks we should rather seek to improve the old operation than take refuge in substitutes, such as Porro's. The only advantage of the latter lies in the diminished hæmorrhage; on the whole, the mortality after it is as great as after the Cæsarean section. Drainage is the great desideratum, and a great portion of the article is in praise of Bardenheuer's system of drainage. The procedure is incapable of being carried out, however, in the Cæsarean operation as usually performed. The author's peculiar mode of operating is intended, therefore, to make the uterine wound practically extra-peritoneal. The method consists in opening the uterus low down, and in making a pocket around the incision by bringing the two round ligaments together with sutures of Czerny's silk. A large drainage-tube passes through the lower portion of the abdominal and uterine wounds, and above the tube these two incisions are closed with sutures. The pocket is drained by means of a small tube passed through an opening into the vagina, just in front of the cervix. A third tube lies upon the uterine wound, and extends nearly to the top of the pocket. If the size of the fœtus makes it necessary to extend the uterine incision farther upward than usual, or if the round ligaments cannot be approximated through enough of their length without too much tension, exudation of lymph must be trusted to a certain extent to complete the vault of the pocket. A distended bladder will obliterate it; therefore that organ must be kept empty, and the author describes a special form of catheter that he has devised for the purpose. A case is given in which the Cæsarean operation was performed after this manner upon a woman who was hopelessly burned at full term, and evidently had but a few hours to live. The child was alive, but growing weaker, and its extraction *per vias naturales* was found impracticable. The mother survived the operation ten hours, and at the autopsy not a drop of blood was found in the general peritoneal cavity.—*N. Y. Med. Journ.*, March, 1882.

ACTION OF HYOSCYAMINE.—From an experimental study of the action of hyoscyamine, Dr. J. C. SHAW concludes:

1. Hyoscyamine causes paralysis if taken in sufficient dose; that this loss of motor power is due to paralysis of the motor nerves.

2. It exercises no visible effect on sensibility.

3. It has no effect on the muscles.

4. It decreases reflex excitability, and afterwards increases it; it tetanizes by an action on the spinal cord, acting in this respect like atropine.

5. In the beginning it causes a rise of pulse and arterial tension, which finally is followed by a fall of both.

Section of the vagi does not prevent either the preliminary rise of pulse-rate or its subsequent fall.

6. After the use of atropine the changes produced by hyoscyamine in pulse-rate are not in any way characteristic.

7. Irritations of the vagi reduce the pulse-rate, but it is small compared with what normally takes place, so that it is inferred hyoscyamine partially paralyzes the inhibitory fibres of the vagi.

8. The increase of pulse-rate is due to a partial paralysis of the inhibitory fibres of the vagi; the fall, to an action on the heart itself.

9. The rise of arterial tension is due to a stimulation of the monarchial vaso-motor centre; the rise is trifling after section of the medulla between atlas and occiput.

10. The fall of pressure is due to partial paralysis of the main vaso-motor centre, and probably to an action on the heart itself.—*Journ. of Nervous and Mental Diseases*, Jan., 1882.

EFFECT OF TANNIC ACID ON ALBUMINURIA.—Having, by compression of the renal artery of the rabbit for an hour and a half, induced an artificial albuminuria, Dr. RIBBERT slowly injected into the jugular vein two to three cubic centimetres of a 5 per cent. solution of tannic acid (*Centralb. für die Med. Wissen.*, No. 3, 1882). He then examined the excised kidney, and found that the coagulated fibrin in the Malpighian corpuscles was distinctly less than in those where no tannic acid was used. Finding that this solution of tannic acid frequently caused coagulation of the blood and death, he employed a solution of 2 per cent. tannic acid neutralized with carbonate of soda, and of this he injected 25 cubic centimetres without causing any serious symptom. The albumen was now completely absent in most of the glomeruli, and in the others there was but a very narrow zone. This experimental result supports the use of tannin, as recommended by Prof. Frerichs in nephritis. Dr. Ribbert would recommend the use of tannin and of tannate of soda in larger doses than has been customary; and, more especially, he would advise that they should be used early in the disease, while still, as he holds, confined to the glomeruli.—*London Med. Record*, Feb., 1882.

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ABSORPTION FROM THE BLADDER.

SOME recent experiments of H. MASS and O. PINNER (*Centralb. f. d. Med. Wissen.*, Dec. 17, 1881) call attention to a subject which for a long time has been a disputed question—Is the mucous membrane of the bladder impermeable, or can drugs be absorbed from the vesical cavity? The importance of a decisive answer is evident when we have such an authority as Sir Henry Thompson saying, "in circumstances of great pain you may inject anodynes into the bladder, if you please; but they are of little value. And you need not be afraid of the quantity, for the mucous membrane of the bladder appears to have no absorbing power." This statement is supported by the account of an experiment in which half an ounce of liquor opii was injected into a human bladder, presumably a healthy one, though no note is made of its condition, without producing narcosis. Tilt and Alling, on the other hand, recommend the injection of morphia in cystitis in doses of not less than one grain, while, again, Braxton Hicks says that he has administered as much as eight grains without producing profound narcosis. These results would seem to indicate that the bladder is at least incapable of actively absorbing opium or morphia, while the account of a case of cystitis by Dr. D. C. Black (*British Med. Journ.*, 1869, i., 164), in which the injection of one-fourth of a grain of corrosive sublimate, dissolved in three ounces of water, caused considerable constitutional effect and intense pain, shows that the immunity is not universal. It is probable that the confusion has been introduced from the study of different drugs under different conditions, and to the fact that in many cases absorption by the urethra, which Alling has shown to be very active, was not properly excluded. Then, again, it is generally held, as was pointed out, we believe, first by Küss, that it is the integrity of the mucous membrane, which is a barrier to absorption, a point which was strongly confirmed by the experiments of Cazeneuve and Livon, who found that when a fresh bladder, filled with urine, was immersed in a vessel of water, dialysis of urea was prevented by the epithelium for thirty hours, while when the bladder was not fresh, or when its epithelium had been destroyed by cantharides, urea could in ten minutes be detected in the water in which the bladder was immersed.

Mass and Pinner experimented on both man and animals, in conditions of both health and disease, and with drugs which could be recognized either by their chemical properties, such as ferrocyanide or salicylate of potassium, by their poisonous effects, such as cyanide of potassium, strychnia, atropia, and curare, or by their physiological action, such as apomorphia and pilocarpine. Different methods of introducing the drug were made use of. In some cases the animal was catheterized, and the drug injected through the catheter, which was then closed and allowed to remain; or the exposed bladder was punctured, the contents withdrawn, and the drug injected, the opening being then ligated. In other cases the substances were injected into the exposed bladder after the introduction of a closed catheter and the ligation of the urethra between the prostatic portion and the neck of the bladder. In all cases glass tubes, inserted into the ureters, served to conduct the urine outwardly, for examination, as fast as it was excreted.

Diseased conditions of the mucous membrane were produced in dogs and rabbits by the injection of dilute solutions of croton oil or oil of turpentine, cantharides being rejected on account of the intense inflammation which it was found to produce. Contrary to what might be supposed, they found very little difference in the absorbing power in animals in the healthy or diseased condition of the bladder, a fact which can only be attributed to some want of analogy in the two conditions compared. The experiments on animals showed that different drugs are absorbed with different degrees of rapidity. Ferrocyanide of potassium and salicylate of sodium are absorbed by the healthy bladder and excreted again, thus showing that although the results of Küss and Sussini are correct, in that a salt of iron, painted on the outside of the bladder, will not show the results of absorption when the epithelium is healthy, examination of the urine coming from the kidney, nevertheless shows the entrance of the potassium salt into the circulation, thus agreeing with the result claimed by Bouchardat.

Cyanide of potassium and strychnia were readily absorbed and produced their toxic action, although more slowly than when given subcutaneously. Atropia was also found to be absorbed by the bladder, but was excreted so rapidly that no constitutional effects were produced, its presence in the urine coming from the kidney, being demonstrated by the dilating power of the latter upon the pupil. This explains Küss's denial of its absorption, who relied on the absence of constitutional effects as proof of its non-entrance into the circulation. Poisoning was not produced by injecting curare into the bladder, as to which point their results do not confirm those of Bernard, although they found that when the bladder filled with curare solution was immersed in a vessel containing water, curare dialysed through the vesical walls. Apomorphia and pilocarpine, on the other hand, they found were absorbed more rapidly than they were excreted, and were, therefore, capable of producing their characteristic effects.

Mass and Pinner's experiments on the human bladder are not as full as could be desired; but, even here, where they are again at variance with Sussini, they found that iodine and pilocarpine, the only drugs examined, were absorbed in 26 out of 41 cases, but slowly and incompletely; while their results with the same drugs in cases of bladder-disease were much more marked, absorption in such cases being very active.

Experiments made by inserting suppositories of iodine, morphia, and pilocarpine into the human urethra, showed that marked absorption occurred; while no evidence was obtained as to the absorption of ferrocyanide of potassium under similar circumstances. No distinction between healthy and diseased urethræ is alluded to.

It is to be regretted that their experiments on the human bladder were not carried further; but, as it is, they suffice to show that absorption from the vesical cavity, particularly in disease, is a possibility which must not be lost sight of.

SYPHILIS AND MARRIAGE.

There are, perhaps, few directions in which so many grave errors have been committed by intelligent and conscientious physicians as in the management of syphilitics as regards their social and sexual relations. Not very long ago, governed by the belief that in syphilis he was dealing with an indefinitely prolonged and practically incurable disease, the conservative practitioner uniformly cautioned his syphilitic patients against contracting marriage at any time, and warned them of manifold dangers to wife and offspring thereby incurred. Others, less careful or more indulgent, and misled by the then prevalent theory that only the primary lesions were contagious, urged or permitted matrimony after the first stage of the disease was passed. Both of these courses were fraught with danger. Celibacy, though possibly harmless when voluntary, has never been found to be so when enforced, and many of those to whom connubial happiness was interdicted, sought consolation in forbidden and often destructive pleasures. On the other hand, the syphilitic too often found his marriage-couch a hot-bed of disease, and his children a perpetual reminder of the follies, rather than of the vigor, of his youth.

The unhappy patient thus rarely failed to have the genuine and weighty burden he was called upon to bear increased by the addition of unnecessary penalties, or of avoidable complications, and it can hardly yet be said that these were due to errors of the past. We have, therefore, been glad to observe the interest excited by recent writings on this subject, to which it seems eminently proper to call attention. As usual the truth lies between extremes, and may in this instance be stated as follows:

Syphilitic patients may be permitted to marry, and will, in all probability, be incapable of transmitting the disease to wife or children if no specific symptoms have been observed for a year or eighteen months, and if thorough methodical treatment has been carried out for a period of at least three years subsequent to the primary outbreak. This rule is a safe and almost unvarying guide to both patient and physician, and its observance will resolve all difficulty in the matter of antenuptial counsel.

There are, however, a large number of persons who marry in spite of the existence of active syphilis, and although the physician may deplore or reprobate this action, it is yet his duty to lessen as far as possible its evil consequences, particularly to the innocent mother and her unborn children. In such a situation his course is equally evident, and it will be his duty,

1. To instruct his patient to avoid paternity in every proper manner.

2. To prescribe vigorous and unintermittent specific treatment.

3. In the event of impregnation, immediately to place the mother upon the same treatment, and to continue it throughout pregnancy.

4. To encourage the mother to suckle her own child, and,

5. To avoid unnecessary disclosures to either husband or wife as regards the existence of syphilis in the other.

Many ethical and moral questions arise in connection with this matter, but we have here set forth the general rules which, in our judgment, should be followed in the management of these serious and complicated cases.

THE ANTISEPTIC TREATMENT OF FEVER.

WE published, recently, the results obtained by some physicians of the Montpellier School in the treatment of fever by antiseptics, notably by carbolic acid. This practice has been followed in this country with very encouraging results. In Germany, for several years past, a plan of treating typhoid, known as the "specific," has been employed. According to Liebermeister, the mortality under the specific medication by mercury, has been ten per cent., and by iodine, ten to eleven per cent. By the iodine method, the tincture, Lugol's solution, or the compound tincture are given during the whole course, up to the beginning of convalescence. Carbolic acid and tincture of iodine are often prescribed in combination—two of iodine tincture or solution, and one of carbolic acid—forming carbolate of iodine. The mixture, when diffused in water, becomes colorless, and has but little taste. The usual dose is one or two drops every four or six hours. The motive for the administration of these, as also of other antiseptics, may be found in the following considerations: The typhoid germ is, probably, received into the intestinal canal, and may, therefore, be acted on by the antiseptic at the first point of contact. A relation apparently exists between the antiseptic and antipyretic action, for the possession of the former implies the existence of the latter. The vitality of the germ or ferment ceasing, the rise of temperature due to its development is prevented. It cannot be alleged that the antiseptic treatment cuts short the disease, but it appears to render it milder in its course, and to lessen the mortality.

THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

THE College is certainly renewing its youth. On every side the signs of the rejuvenation appear, both actually and prospectively.

On the scientific side of its work, the most important step is a provision lately made by which the meetings of the College are to be rendered both interesting and profitable, by a series of valuable papers which the members have agreed to furnish for at least the next three years. Such a momentum once acquired, it is believed will not readily lose its force.

The practical side is also seen in the establishment of the Directory for Nurses, one of the most valuable innovations the College has ever made. Along with this, and partly as a consequence made possible by it, it is proposed to open the Library during both day and evening, instead of limiting its use, as is now the case, to the few and busy hours of the midday. The Library and the Mütter Museum also have so outgrown their quarters that it is necessary to provide increased accommodations or both.

Another evidence of quickening life is a proposition which is being bruited for some social privileges in the College building. It is suggested that a room on the first floor be fitted up in which the Fellows may chat and smoke. Such a convenient place for a conversation-room has long been wanted. It will bring the Fellows into pleasant personal relations, and will relieve the Library also of much conversation which not seldom has annoyed readers and students.

For a number of years past the College has been much hampered by its limited income, and last year it was obliged to increase its annual dues fifty per cent. to meet its expenses. The College, unfortunately, unlike other similar bodies, has never made any provision for the commutation of its annual dues, and consequently has no invested endowment for general expenses. Had it been otherwise it is not without the bounds of probability to say that to-day the College would be a wealthy corporation. It behooves us in the present to think of the future, and we hope that we may be able before long to say that provision has been made for the commutation of annual dues by a single payment, and to urge upon the Fellows the desirability of availing themselves of this privilege so as ultimately to place the College in a position of affluence, in which it will be able to meet the growing wants of the future instead of being more hampered than at present.

It is perhaps almost too great an innovation—though it has been suggested, and we hope before long to see it realized—that the College should have an annual dinner, preceded by an address by the President—not so much a medical address as a review of the progress of the College for the past year, with suggestions of improvements and advancements for the future. We believe that not a little good would be done by such an arrangement—a plan which works admirably in England.

DOCTORS AND DRUMMERS.

A COMMERCIAL traveller of great experience with all classes of men, and very shrewd and discerning, was asked if medical men who had seen much of life were not difficult to deceive. Looking around to see that none of the fraternity were present, he said in a whisper, with a meaning smile and an expression of uncommon cunning, "*Doctors are the most gullible of men.*" Are there reasons for believing that this implied simplicity is a just estimate? Observing the number of those who, with a mysterious package, are seen to pass from one doctor's office to another, one can hardly doubt that our craft is not an evil-suspecting one. The peripatetic vendor of maps and serial publications; the solicitor of malt extracts, infant foods, elixirs, and pills; the agent of instrument, book, and electrical machine

houses, and the swarms of "drummers" of every conceivable business, apparently find in the medical profession a profitable body for the exercise of their various arts. Indeed, it may be doubted if the time and money of any other business or professional men are so diverted from their proper uses for the benefit of others.

The different kinds of solicitors who prey on the doctor have as various methods of attack. There is the confident man who walks in with a jaunty and familiar manner, and, taking the best seat, assumes that his particular ware is the doctor's special need. He produces his book to take down the order as a matter of course, and if it should so happen that the doctor declines, he looks up with an injured and surprised air, as if to say, "Can it be possible?" There is, also, the insinuating solicitor. He comes in with a deprecating manner, and will not be seated until pressed, and exposes his wares with some ingratiating suggestions of their value to the eminent physicians whom alone he visits. If successful, he grows confidential, and bestows an abundance of subtile compliments; if he fails, he reproaches only by an injured but resigned manner, and retires with a respectful reference to a future more successful interview. Another type, unhappily too common, is the unfortunate doctor, turned solicitor. He appeals by his appearance of need, by his claim of poverty. He failed in his profession not because of his shortcomings, but was combined against by all the hosts of misfortune. He will not only sell his wares supported by this claim, but he may be induced, although with much reluctance, to accept a little money for his immediate needs. Yet another variety is the impudent and hectoring drummer, who carries his objects with a high hand. He will force his goods on him who hesitates, and will support their quality with an abundance of strong language. He is readily offended by denial, and generally goes out in a huff when he fails to receive an order. If he sells his wares, he is voluble and patronizing, offers a cigar, and generally lights one, and, puffing away, goes off with the air of a conqueror. There is yet again the high-toned solicitor. He is correctly dressed, assumes the manner of a man of fashion who descends to business for amusement, and comes, if he can, with a letter of introduction. He expects to be treated with great consideration as a "high contracting party," and to receive an order in deference to his respectability. He is the most difficult of all the peripatetic gentry to conduct any business with, for to refuse to listen to his lengthy disquisitions, or to buy his wares, assumes the aspect of a personal affront, or a sacrifice of hospitality.

In what guise they come, or in what attitude they appear, the unsuspecting doctor falls a victim. His amiability, or his credibility, or his sensibility, or his hospitality, may be in turn the avenue to his pocket. The net result is, the doctor is used to benefit some one who has no real claim to flourish on his bounty. It might be supposed by a superficial observer that doctors are easily deceived because weakly credulous. Nothing could be more unjust or erroneous. A disposition to see the best in human nature, a patient endurance of the weaknesses or failings of others, and a generous confidence in the pretensions of those who seem to be what they assume, are natural results of medical professional experience. Let us indulge the hope that these characteristics may be preserved. Long be the time before the physician shall develop the suspicion and lack of confidence in all mankind, which are the natural outgrowths of the lawyer's training.

WITH feelings of deep sympathy for the victim, the profession will read the graphic report which we give on another page of the attempted assassination of Dr. John P. Gray by an unguarded lunatic. The community surely has had sufficient warning of the danger of permitting even the apparently harmless insane to roam at large. As there is no telling when a lunatic may not suddenly become dangerous, a lunatic at large remains a constant menace to society. Certainly the time has arrived when a well-considered law should be framed requiring that lunatics should be kept under such supervision that human life may no longer be the possible price of their unguarded freedom.

THE Commencement of the University of Pennsylvania on the 15th instant was noticeable for at least one unusual feature. The bouquet is not only doomed, but gone, and no one will mourn. It had grown to be an intolerable nuisance, and we are glad the Class of '82 had the courage and good sense deliberately to abolish it by their programmes, which read "no flowers received." Formerly invidious distinctions were often made. A city man, who had many fair or partial friends, was burdened with a dozen bouquets, while he of Texas, or Minnesota, or Japan, unless, perchance, the lack was supplied by a wily but not over-honest trick, seemed neglected. To see a blushing, newly-fledged "doctor" hieing again and again upon the stage, his hands already cumbered with baskets and bouquets, each with the inevitable white lily in the centre, and fringed with a flimsy paper border, was simply ridiculous, and the "distribution of bouquets," with its noise and confusion, marred an otherwise dignified ceremonial.

ELSEWHERE we publish the resolutions adopted by the Medical and Surgical Society of Montgomery, Alabama, in reference to consultations with

irregular practitioners. The Society has done wisely in re-enunciating its sentiments, and it would be well if similar action were taken by medical societies generally, in view of the heterodox ethical doctrine which has recently been promulgated by the New York State Society.

REVIEWS.

Illustrations of Dissections, in a Series of Original Colored Plates, Representing the Dissection of the Human Body. By George Viner Ellis and G. H. Ford. 2 Vols. *Second Edition.* 8vo, pp. x, 233, 226. Pl. lviii. Library of Standard Medical Authors. New York: William Wood & Co., 1882.

This is a reproduction of Mr. Ellis's well-known life-sized plates. Of the text and original plates it is needless to say a word. They are admirable in all respects. The reprint differs chiefly in the size, all of the plates being reduced to a uniform octavo page. Most of them are clear and good, but some of the smaller plates, especially those of the head, face, and neck, are so much reduced as to lose a great deal in distinctness. This is especially true of plates xiii. and xiv., showing the interior of the skull. The size of the page would have allowed of far less reduction, and we think it unfortunate that they have been made so small.

The second volume contains the Perineum, Abdominal Parietes, Pelvis, and Lower Limb. Like the first volume, it is a marvel of cheapness, but it also loses much in distinctness by the reduction from the life-sized plates of the original. All who can afford the original ought to get it by all means, but those who cannot will find this the next best thing, and an excellent one for the money.

A System of Surgery by Various Authors. Edited by T. Holmes. *First American from Second English Edition, revised and enlarged,* by John H. Packard, assisted by a large corps of the most eminent American Surgeons, in three volumes. Vol. III., with 423 illustrations. 8vo, pp. xxxvi., 1059. Philadelphia: Henry C. Lea's Son & Co., 1882.

The present volume completes this important and capital work. It contains chapters on the Diseases of the Respiratory Organs; of the Bones, Joints and Muscles; of the Nervous System; Gunshot Wounds; Operative and Minor Surgery; Diseases of the Skin; Parasites and Venomous Insects and Reptiles; the Surgical Diseases of Childhood; Surgical Diagnosis and Regional Surgery; and Hospitals. Among the American revisers are Drs. Solis-Cohen, Markoe, Bradford, Conner, Bartholow, McGuire, Morton, Leidy, and others. The two most important changes from the English edition are that Dr. Van Harlingen has re-written the chapter on Diseases of the Skin, and Dr. J. C. Reeve has so revised Lister's article on Anæsthetics as to make practically a new article of it—and a much better one. Dr. Reeve follows the well-nigh unanimous opinion of the profession in this country in advising ether in preference to all other anæsthetics, except nitrous oxide for short operations. Dr. Van Harlingen's article on the Skin, is an excellent brief *résumé* of our present knowledge of the subject, and worthy of his previous reputation. On nearly every page we notice bracketed additions, all too brief, it is true, in most cases, but valuable and to the point. The illustrations are again more than doubled, a feature we have commended most strongly in the previous volumes. The paper, type, and general make-up of the volume could not be surpassed. The work is one of our most valuable surgical text-books.

Recent Progress in Surgery. A Report to the Wisconsin State Medical Society. By N. Senn, M.D., of Milwaukee. Reprint from the *Transactions of the State Medical Society of Wisconsin.* 8vo, pp. 44. Milwaukee, 1881.

We notice this reprint because of its excellence. If all committees in the various departments of medicine were to do such good work as this one, the members of our State Medical Societies would learn a deal, and the committees give a most excellent reason for their existence. Dr. Senn has taken up various topics, such as Surgical Pathology, Listerism, Partial Excision of the Alimentary Canal, the Radical Cure of Hernia, Gastrotomy, Nephrotomy and Nephrectomy, Subcutaneous Osteotomy, Fractures and Dislocations, Nerve-stretching, and a number of others, and has given a succinct *résumé* of what has been done in each within the last two or three years, with references to the original sources of information. The result is a capital one in every way. It is a kind of work which for his readers is excellent, but for the author even still better. His knowledge is extensive, methodical, and exact; his mode of statement brief, yet clear. We notice one very awkward Gallicism "recidivations," instead of "relapses;" and the omission of all allusion to contemporary French medical literature is unfortunate. While the notes refer to most of the best-known American and English journals, and bristle with "Blatts" and "Schrifts," not a single French reference is given.

SOCIETY PROCEEDINGS.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Stated Meeting, March 1, 1882.

W. S. W. Ruschenberger, M.D., President, in the Chair.

A Case of Fungosities of the Bladder, Cured by Scraping with the Finger; with some References to the Literature of this Affection.—Dr. Walter F. Atlee stated that he reported this case because it is a rare one, because it is instructive in a practical point of view, and because consultation with most of his works of reference would not assist the surgeon in benefiting a similar case as much as can be done by doing as was done here. The following is the history of the case:

Miss S. B. consulted me in the summer of 1880, on account of painful and frequent micturition, with hæmaturia. She was born in April, 1861; her father is a large, strong, and healthy man; her mother died when she was a child, after having suffered from many manifestations of scrofula.

She said she remembered to have felt, occasionally, a slight pain in passing urine, from her earliest recollection. When seventeen years of age she first suffered severely; her urine then was very light in color, with no sediment, but with a strong odor. The pain was felt while passing the urine and after it had passed; after the emptying of the bladder there was a constant desire to pass something more. She became thin, pale, and haggard. When eighteen years of age, some pus appeared in the urine, and occasionally a little blood. These symptoms increased to such an extent that she was obliged to keep her bed for several months. This rest, aided, perhaps, by medical treatment, for she had always enjoyed the care and attention of our most ex-

perienced physicians and nurses, made some improvement in her condition, so that she was able again to go out. All the worst symptoms, however, soon returned, and when I saw her, in September, 1880, her state was a very serious one; there was constant inclination to empty the bladder, which could not be resisted oftentimes for more than a half-hour, and the loss of blood was considerable.

The urine, when examined at this time, showed pyoid bodies, epithelium from the bladder, and crystals of triple phosphate, together with blood-corpuscles in abundance. The blood was of a bright-red color, showing that the urine had not had time to produce those changes in color always produced by long contact with the hæmaglobin of the corpuscles.

With such symptoms, this case seemed clearly to be one of foreign body in the bladder, and the advice given was to attempt its removal without delay. For this purpose the patient was put under the influence of anæsthetics, and the urethra was dilated by means of a pair of ordinary dressing forceps, introduced, opened, and withdrawn as often as necessary—this being, in my experience, the best way of effecting this dilatation.

When the finger was then passed into the bladder, nothing abnormal was felt, no calculus nor distinct tumors, except that about the fundus were a number of fungosities or soft growths, some of them more than a half inch in length, and about one line in thickness. These were carefully scraped off by the end of the finger and by the finger-nail. This simple operation resulted in the perfect cure of my patient, and until the present time there has been no symptom of a return of her disease.

Dr. Atlee said, I call the growths thus removed fungosities, and not villous growths, inasmuch as that they were not like tufts of fine hair (*villi*), but resembled rather *fungi*, or certain mosses. I have several times seen similar growths removed from the cavity of the uterus, in cases where for years they had been the cause of alarming hæmorrhage. They have, anatomically, the same fundamental structure as the mucous membrane whence they spring; they are simple excrescences of this membrane; they are formed of granular amorphous matter, of cellular tissue in small quantity, and of fibro-plastic elements; almost all have a large number of capillary vessels ramifying through them, and some are covered by epithelium. This epithelium is *on* the surface *homologous*, and not *within* the subjacent connective tissue, *heterologous*, which is characteristic of epitheliomatous growths.

Dr. Atlee said that one reason for reporting this case to the College, was, that consultation with most of his works of reference, would not enable the surgeon to benefit his patient as much as was done in this case. In Holmes's *System of Surgery*, it is said: "The indications are to allay pain, to subdue spasmodic action of the bladder, to prevent hæmorrhage by internal remedies, and to counteract its effects on the system by chalybeates and nutritious diet. Astringent injections very carefully introduced into the bladder, such as weak solutions of acetate of lead, or of nitrate of silver, may be tried; they are, however, not to be repeated more than once or twice, unless marked benefit is observed, and signs of vesical irritation have not been produced by their employment." This is the advice given in almost all surgical works, not only general but special. Even in Coulson's excellent work on *Diseases of the Bladder and Prostate Gland*, of which a sixth edition was published in 1881, we find nothing but a similar plan of treatment recommended. Though quite out of place, I will cite here the diagnostic symptoms given in Coulson's work between villous growths and calculus, as being the best and clearest I have ever met with. In all works the diagnosis of these growths is said to be extremely difficult; for example, in the *Dictionnaire de Médecine*, it is said, "Fungus of the bladder may be suspected, but a precise diagnosis cannot be established."—Tome xxx., p. 744. "The pain in calculus is most severe after the urine has been passed, but in villous tumors the discomfort is aggravated by fulness of the bladder, and relieved by its evacuation. The pain in calculus is relieved by rest, which has little or no effect upon the symptoms of tumors of the bladder. The hæmorrhage also in the latter affection is neither decidedly aggravated by movement nor relieved by rest. In villous growths, the blood is generally pure; in hæmaturia, due to calculus, there is generally more or less pus mixed with the blood. Examination by the rectum, or with a sound in the bladder, causes pain in cases of villous growth, and increases the hæmaturia, whereas the symptoms of calculus are not necessarily aggravated by these manipulations."

To return to treatment, Nélaton says: "In women, it is sometimes possible to reach the fungus by dilating the urethra and the neck of the bladder. The case of Warner tying a polypus of the bladder in this way is recorded above; and in case of a fungous growth, an analogous operation should be done."—*Pathologie Chirurgicale*, tome v., p. 301.

In Warner's case, above referred to, a polypus penetrated into the urethra of a young woman, and pushed out of the meatus. An incision was made, dividing the half of the urethra, the rest was dilated, and also the neck of the bladder, the tumor was drawn out, and a ligature applied to the pedicle.

In the *Principles and Practice of Surgery* of Prof. Agnew, and in the third edition of Prof. Gross's treatise on *Diseases of the Urinary Bladder*, revised by Dr. Samuel W. Gross, we are advised when symptoms of papillary and polypoid fibromas are seen in women, to dilate the urethra by special instruments, and remove them as may be found best under the circumstances of the case. Some eighteen cases, altogether, are recorded in these works where vesical growths were removed by various operations. Of the prognosis in such cases, Dr. Gross forcibly and truly says: "It is of the worst possible description. Death almost invariably follows from sheer loss of blood, or the combined effects of hæmorrhage and pain." Of the treatment, he says "surgical interference is demanded imperatively, since, without it, a fatal issue is almost the inevitable result."

The best account I have met with of the flocculent excrescences, or fungosities in the bladder, is contained in the *Lectures on the Surgical Disorders of the Urinary Organs*, by Reginald Harrison, 2d edition, London and Liverpool, 1880. Mr. Harrison refers to the paper of Robert S. Hudson, in the *Dublin Journal of the Medical Sciences* for June, 1879, to that of Prof. G. Murray Humphrey in the *Medico-Chirurgical Transactions* for 1879, which contains probably the best account to be found of the pathology of growths into the bladder, to Mr. Norton's cases in vol. xii. of the *Clinical Society's Transactions*, and to a paper of J. H. Roberts and C. De Morgan in vol. xxi. of the *Transactions of the Pathological Society*, where the microscopical appearances are very beautifully represented. He also relates a case (p. 359) communicated to him by a Dr. Alexander, where chloroform was given and the urethra dilated; a wire écraseur was passed, and a large growth was removed; smaller growths were removed by the finger. Fifteen months afterwards it was necessary to remove some more by the finger, after which the patient remained well.

This case of Dr. Alexander is doubtless the same as that related in great detail in the London *Lancet* for August 17, 1878. The writer says he cannot find any other case recorded of removal of a villous growth from the female bladder, and quotes from Bryant's *Surgery*

"that there is no cure for this affection; the surgeon can only relieve symptoms. The disease usually destroys life in about two years."

Enough has been said to show that cases such as I here report are rare; that they cause great suffering, and, eventually, loss of life, that the means usually recommended fail in giving relief, and that an operation, easily performed, attended by no risk, and followed by no bad consequences, does cure such cases, and that this operation appears to be very generally unknown.

One more observation may be permitted, indeed, seems called for, in this rather desultory paper. This is, that the history of a case such as is here related, justifies us in looking favorably upon the resort to a similar proceeding in cases of similar disease in the male patient. An incision into the neck of the bladder, when so much suffering and so great danger to life are present, is surely justifiable. It is a matter of no great difficulty nor danger. Even if it was found, after the making of this opening, that the diseased tissues could not be taken away, the patient would, in all likelihood, obtain some relief from the free passage afforded to the purulent and bloody discharges. There is a case recorded (see *British Medical Journal*, vol. ii., 1875, p. 493), where Billroth did this, and encountering a fibrous tumor, the size of which was such that it could not be extracted through the perineum, he cut through the recti muscles above the pubic bone, made a transverse incision into the bladder, and then tore through the tumor near its base with the finger, and dissected out the pedicle; the patient was perfectly cured.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 16, 1882.

Fordyce Barker, M.D., President, in the Chair.

After the usual reading of the minutes, the President announced the presence of Drs. Billings, Edgar, and Clements, U. S. A.

Dr. H. G. Piffard exhibited one of Dr. Felton's medical batteries. This battery was of small size. The interruption of the current was many times more frequent than in any of the induction machines now in use. It was quickly made ready for transportation by removing the zinc, and putting in a cork. The delicacy of the current and frequency of the interruption was considered a very great advantage. The cell was comparatively large in proportion to the elements, and, hence, would only require renewal of fluid at long intervals. It belonged to the class of continuous coil batteries.

The scientific paper of the evening was by Dr. Frank H. Hamilton, entitled:

The Struggle for Life against Civilization and Æstheticism; a Supplement to the Discussion on Plumbing, etc.

Full one-half of the paper was devoted to the rehearsal of the points made in Mr. Wingate's paper, before the Academy of Medicine at a previous meeting, on plumbing and house sanitation, and points brought forward in the discussion which followed that paper. In regard to sewer-gas, Dr. Hamilton said, the gases which are commonly known under the name of sewer-gases, are the most potent agents of disease. By means of them, it is certain that typhoid fever and diphtheria are propagated, and it is my conviction that many other zymotic diseases, such as Asiatic cholera, may be, and sometimes are, propagated in this way. I state this the more boldly because I find that the opinion is shared by many others, whose views are entitled to respect. Of course, these gases could not enter our houses if it were not for badly-constructed sewers and sewer-pipes. It is thought by many to be enough for safety if all traps are flushed by water. But it is well known that water is no protection against these sewer-gases, for they pass readily through it.

Our hearts were all touched by Dr. Doremus's allusion, a few weeks ago, to the death of his boy, by a sickness caused by the defective plumbing of the house in which he lived. Who shall say how many such deaths there are in this city? And in view of these facts, in view of our failure to introduce a perfect sanitation, is it strange that Dr. Barker said that, were he building, he would have the water-pipes and sewer connections in an annex?

What, then, is the upshot of all this matter? If these sanitary engineers, chemists, and hygienists, who were requested to take part in the discussion of Mr. Wingate's paper, because of their knowledge and scientific attainments, experience and practical skill, have nothing more to suggest, how is the evil to be successfully met? With all respect to the gentlemen whose views have been presented to us in past discussions, I must say that they have suggested nothing of any importance which is new; nothing that was not known before; nothing, indeed, which has not been tried, which has not, for one reason or another, proved itself to be either impracticable or insufficient, and, in many cases, totally inefficient. Science has not kept pace with civilization, and without concessions on the part of civilization there is, at present, no adequate remedy for the evils we suffer. Since Bede's day we have had occasion to observe that when men left the open plains and the small hamlets, and crowded themselves into the narrow limits of cities, the ratio of sickness and death was proportionately increased. When, also, in the progress of civilization, the fire-places disappeared, with their great open throats—the best ventilations ever invented—and decorated cast-iron stoves were substituted, house sanitation experienced a loss which no sanitary engineer or architect has ever repaired; and when, in obedience to the same inexorable demands of progress in luxury and æstheticism, gas was substituted for oil, and hot-air or hot-steam furnaces for stoves, the hand was again moved forward another point on the dial of human life.

Possibly nothing will so forcibly illustrate the magnitude of the evil we are considering as the fact that it has given birth to a new profession. The calamities necessarily incident to the progress of civilization, long since made it necessary that there should be a class of educated men, whose duties it should be to look after the rights of citizens, and another class to attend to matters of health, and now a condition has arisen which renders necessary a new class of specialists or professional men called "sanitary engineers," who are supposed to be well informed in matters of hygiene, architecture, or house construction and engineering, and who for the present seem to find plenty of occupation, and are, no doubt, performing a much-needed and very useful service, but of whom it may be said that up to the present time there is no evidence that they have done anything more than to investigate the evils that they have been asked to remove; and, indeed, there may be found many notable examples in which the best sanitary engineers have failed to effect even a mitigation. I repeat, that in order to render pure and innocuous the atmosphere of our houses, it will be necessary, first of all, that civilization should make some concessions. The concessions demanded as a condition of the successful application of our present knowledge of the laws of hygiene are:

1. That all plumbing having any direct or indirect communication with the sewers shall be excluded from those portions of our houses which we habitually occupy—in other words, that it shall be placed in a separate building or annex.

2. That we return to the open fireplace or the grate, as a means of warming our houses.

3. A diminished consumption of oxygen by gas-burners. It is still an open question whether we shall be able to light our dwellings with electricity, but so long as we are obliged to depend upon gas, we must content ourselves with light, and not insist upon illumination.

The concessions demanded are named in the order of their importance. The necessity for each is urgent, but the first admits of no compromise. However, there are many other possible sources of ill-health and physical decay incident to civilization than those I have referred to especially. The wholesome light of the sun is partially excluded from the apartments of wealth and luxury, because it fades the costly rugs and drapery, and offends the educated eye by its vulgar and intrusive garishness, and not unfrequently at large receptions the light of day is excluded wholly, in order that the more æsthetic and kaleidoscopic effects of gaslight may be substituted, regardless of the fact that the air is thus rendered unfit for respiration. Our social habits demand that both children and adults shall devote the hours nature intended for sleep to amusements, which amusements are rendered more intoxicating and pernicious by the prolonged respiration of heated and poisonous air. Dress makes its contribution. Utility and regard for health are almost invariably made subservient to the caprice of fashion and the study of effect. Flimsy head-dresses, low necks, short sleeves, tight corsets, high heels and narrow toes do not contribute the sum total of the æsthetic requirements of civilization in the matter of dress. Walking, as a means of locomotion and of exercise, is rendered difficult and sometimes impossible. To romp, or even to move with rapidity and sharp angularity, is unseemly in young ladies. And such young men as "move" in the most refined and polished circles, neglecting robust and manly out-door exercises, pose in attitudes which demand the least possible muscular exertion, or dawdle in effeminate dissipation. In the "best" society there is neither muscle nor backbone. Almost all respectable citizens ride when they might walk, and complain of the want of breath when the absence of an elevator compels them to ascend a flight of steps. Even when travelling, over-heated cars, long confinement in one position, hurried and irregular meals, dust and smoke, bring us to the end of our journey weary, and often sick. Railroads have enabled us to accomplish more in life than was possible when men travelled in coaches or on horseback, but it is doubtful whether in the shortening of human life it has effected the loss is not greater than the gain. All of these evils, and thousands not enumerated, are the necessary incidents to civilization, and medical men are painfully familiar with the impediments they present to the preservation of individual and public health. Indeed, as has been already suggested, it was the presence of these evils chiefly, which has rendered our existence as an integral part of society necessary. Nor do I assume too much in saying that, were it not for the teachings of medical men, the physical decay of the human race, under the adverse influences of civilization, would be rapid and complete.

THE PRESIDENT, in opening the discussion, said that the grand point to keep in view is the practical application and advantages necessary for the protection of ourselves, our families, our patients, and the community at large. Hence, it is hoped that the general tenor of the discussion will take this direction. He was happy to state that Prof. Doremus was present for the purpose of speaking upon this subject and demonstrating a few points.

PROF. DOREMUS called attention to a chart which hung on the wall, showing the solubility of various gases in water. If, therefore, we had a gas on one side of a trap containing water, the gas would be absorbed by the water, and, as a consequence, would pass to the opposite side. To illustrate this the following experiment was performed: A three-necked bottle was taken, into which some sulphide of ammonium had been placed. Through the cork in one of these necks a long tube was projected above to represent the ventilating shaft; a bent U tube was made use of, upon the opposite side of which was placed a paper moistened with the sulphide of lead. The sulphide of ammonium passed through this tube, darkening the paper, notwithstanding the presence of the ventilator. A second experiment was performed similar to the first, with the addition of a trap, into which was placed some permanganate of potash. In its passage through the trap the sulphide of ammonium was decomposed, and produced no effect upon the paper. In a third experiment the chloride of zinc was placed in the bent tube, and a similar result obtained. He considered that it was thus proved that gases passing through a trap might be decomposed by some such chemical substance as permanganate of potash, chloride of zinc, sulphide of iron, and many others. The power of this permanganate as a decomposing agent was beautifully shown by a simple experiment. To a quantity of indigo water was added an equal quantity of water which contained a single drop of permanganate, and immediately the solution of the indigo was decolorized. He wished to have it understood that he still adhered to the observation that he made at a previous meeting, which was to the effect that sewer-gases would pass through traps, notwithstanding they were filled with water, and notwithstanding the contrary had been stated since the time alluded to, in the course of two lectures delivered in Columbia College. The speaker called attention to the quantity of impurities set free in the process of burning ordinary illuminating gas. Prof. Faraday, many years ago, had devised a beautiful mechanism by which the carbonic acid gas, vapor of water, and other products of combination of illuminating gas, were carried completely out of the building. By experimentation, it had been determined that one gas-jet would take away from the oxygen of the room as much as would be consumed by eight or ten persons, hence the point raised in the paper was an important and interesting one—very important in connection with the use of the electric light, where there is no robbing the air of oxygen.

At the request of the Chair to name the cheapest and most practicable chemical substance to make use of in the decomposition of sewer-gases, Prof. Doremus said that the manganate of sodium and the sulphide of magnesium had been very successfully used by heating the two together and producing a permanganate which liberated ozone. Prof. Mallet had recently devised a very cheap method of manufacturing the chloride of zinc, which was also a valuable agent.

DR. BILLINGS, U. S. A., of Washington, D. C., being called upon, said that when he was asked by the President to be present and make a few remarks, he was at a loss, from reading the title of the paper, to know the character of the speakers' remarks. But, as he had now heard the paper, he would say, first, in reference to plumbing, that while it was perfectly true that gases are absorbed by water, and would be given off on the other side of the trap, it must not be forgotten that the gases are not present in our soil-pipes in any such quantities as in the glasses with which the experiments had just been performed. In order to determine just how much gas was present in our sewer-pipes, an elaborate series of experiments were performed last year in Glasgow by a competent medical gentleman. He took an ordinary water-closet, placed an apparatus over the bowl, removing the top, and collected and analyzed the gases given off during a given space of time. He did this under two conditions: first, when the soil-pipe

was carried directly up through the house and opened at the top, in which case there was no pressure on the water in the trap; and, second, when the pipe was closed at the top. Now, when the soil-pipe was freely open above, the amount of ammonia and hydrogen given off in the course of four hours was almost imperceptible. When closed, the quantity was about triple. This was in an old dwelling, which, upon removal, was found to have a very foul soil-pipe. When there was an opening on the house-side of the trap, so that free air could pass through the soil-pipe, the amount of dangerous gas present was so exceedingly small that it was not worth while taking it into account. As to the question of the ill effects of these gases on the health, some go so far as to say they are never manifest. He, however, considered it probable, though it had not been scientifically demonstrated, that these gases, present in considerable quantity, were injurious to health; and he also considered it extremely probable, that what we call specific infectious diseases, are not produced by gases arising from the decomposition of filth, dead animals, or decaying vegetable matter, under any conceivable conditions of moisture, else why were they not more prevalent in the tropics?

Dr. Billings discussed the paper at great length, and brought out many interesting points not touched upon in the paper, or the discussion which followed the reading of Mr. Wingate's paper a few weeks previous.

The paper was further discussed by Prof. Doremus, Dr. Andrew H. Smith, Prof. Janeway, and by its author, Dr. Hamilton.

CORRESPONDENCE.

THE MEDICAL ATTRACTIONS OF LEIPSIC.

To the Editor of THE MEDICAL NEWS:

SIR: The winter semester is rapidly drawing to a close, for though its end is set down for March 15, most of the lectures will stop before that time. The summer semester, which is advertized to open on April 17, will last till August 19, and it may interest some of the readers of THE MEDICAL NEWS to know what is offered to the student of medicine here in Leipsic during the summer months.

To begin with anatomy. This branch is represented by Profs. His and Braune, the former so well known from his numerous contributions to histology and embryology, and the latter from his *Anatomical Atlas of Frozen Sections*. Prof. His will give a course in general histology of three hours three times a week, the first hour being devoted to a lecture and the last two to practical work with the microscope. The specimens are, as a rule, already cut and stained, the student being supposed to be already familiar with the ordinary histological technicalities. In this way much time is saved for actual observation and study of the specimens themselves. Further instruction in histology is given by Prof. Wenzel and Dr. Gaule.

Prof. Braune devotes four hours a week to a course on topographical anatomy, and three hours a week to osteology and arthrology.

In addition to the above, Prof. His gives a course in the developmental history of the higher animals and man.

The Anatomical Institute is a model of its kind. It is a large building, standing alone, and is used for nothing but the study of anatomy. The cadavers are all kept in alcohol, so that the usual odor of a dissecting-room is entirely absent. The flesh looks, and indeed smells, not unlike smoked beef, and on a body so preserved one may work for months without its becoming in the least offensive, and I need hardly add that very fine and beautiful dissections are thus made. Alcohol is very cheap here, the duty being light, and its use as a preservative is thus possible.

The lecture-room here, as well as at the Physiological Institute, is lighted by electricity, the Siemen's lamp being used.

The Physiological Institute is presided over by Prof. C. Ludwig; Prof. Drechsel having charge of the chemical laboratory, and Dr. Gaule of the histological department.

Prof. Ludwig will lecture on the physiology of nutrition five days of the week; and will, besides, receive into his laboratory, as special pupils, such as desire to make researches on particular subjects. The laboratory is celebrated for the number of valuable contributions to physiological science that have issued from it; and none who have had the privilege of working there leave it without carrying away, not only the fruits of study obtained under so excellent a teacher as Prof. Ludwig, but also the most pleasurable recollections of the kindly, genial man, who inspires in the breasts of all his pupils a true enthusiasm for their work and a deep affection and veneration for himself. Dr. von Frey, his assistant, will give a course in physiological optics.

Instruction in the Practice of Medicine is given by Prof. E. Wagner and Prof. Erb, the well-known neurologist. The latter holds a medical policlinic five times a week, where all kinds of cases are shown, though preference is given to those of neurological interest. Prof. Erb will also lecture on diseases of the organs of circulation, respiration, and locomotion, and give a practical course in Neuropathological Diagnosis. This course was given, for the first time, last year, and was very highly praised by all who were in it. Prof. Erb is an excellent teacher, and his clinic is largely attended. Prof. Wagner's clinic is held every morning, in the auditorium of the St. Jacob's Hospital, the patients being wheeled in on their beds. Those students who wish to do practical work, inscribe their names on the list of "practicants," as they are called, and every morning, at the beginning of the clinic, the new patients admitted are assigned to them in turn. The practicant visits the patient, and, without any outside aid, takes his history, examines him, and makes his own diagnoses. (Of course, this only applies to patients not likely to be harmed by an inexperienced examiner.) The next morning the patient is wheeled into the auditorium, and the student, to whom he has been assigned, gives the history and the results of the examination before the class, Prof. Wagner making remarks, supplementing omissions, and correcting mistakes. The patient is then re-examined by the Professor, a diagnosis is made, the case in general is considered, and the treatment spoken of.

This system is a very good one, for, in the first place, it teaches a student to rely on himself, and to apply his knowledge, when brought into personal contact with a case of disease; while, on the other hand, it gives him a chance to see exactly what his deficiencies are, and, furthermore, as his work will be criticized before his classmates (representing here what will, later, be the public in general), he naturally strives to do his best, and so habits of care and precision are formed.

Twice a week the students are taken through the wards, and shown such cases as cannot be brought into the auditorium. Prof. Wagner's relations with the members of his class are cordial and unconstrained, for he seems to have the faculty of making every one feel at his ease.

The hospital, a new one, is on the barrack system, each barrack containing but a single ward. Interesting material is abundant.

Though the medical clinics are excellent, yet, since I am writing for Americans, I must say that they are no

better than those held in Philadelphia, New York, Boston, and other large cities, by the representative men of the profession, and, as far as treatment is concerned, I do not see that there is much to be learned.

The surgical division of the hospital is directed by Prof. Thiersch, well known from his pathological investigations. A daily surgical clinic is held, and although any one fresh from an American hospital might perhaps be struck with the peculiarities of operating exhibited here, still the clinic is not entirely devoid of interest. At Halle, a university town but half an hour's ride by rail from here, there are Volkmann and Olshausen, both beautiful operators.

The Pathological Institute has Prof. Cohnheim for its head, a man whose name is known and honored wherever medicine as a science is cherished. Prof. Cohnheim will give a course in practical demonstrative pathology, including the making of autopsies, and, in conjunction with Prof. Weigert, a course in microscopic pathological anatomy, each for two hours, three times a week. The latter is for beginners, while those who desire to do more advanced work are admitted into the microscopical laboratory of the institute, where Prof. Weigert and Dr. Huber give instruction; the former well known by his investigations into tuberculosis and his methods for staining micro-organisms. Prof. Cohnheim takes personal charge of the laboratory for experimental pathology, to which a limited number of special students are admitted, opportunity being thus given to become acquainted with the methods of research of this eminent master. Prof. Weigert and Dr. Huber both give courses in special pathological anatomy in addition to the above.

The department of gynecology and obstetrics is presided over by Prof. Crédé, at the Frier Institute, a building erected especially for the cultivation of these two branches of medicine. From what I have heard the material is tolerably abundant, and students have frequent opportunities of witnessing and assisting at births and obstetrical operations. Dr. Leopold, Prof. Hennig, and others give numerous courses on special allied subjects.

Prof. Hofmann and Dr. Emmerich lecture on hygiene, special students being admitted to the laboratories for practical study in the methods of investigation.

These are the chief attractions of Leipsic as a medical centre, though I should add that good courses are given in the special branches of medicine. Prof. Coccius and Dr. Küster have classes for diseases of the eye; Prof. Hagen, for the throat and ear; Prof. Heubner, the author of *The Syphilitic Degeneration of the Cerebral Vessels*, etc., has a clinic, and lectures on diseases of children; Dr. Neisser, the discoverer of the *bacillus leprœ*, has a class for skin diseases and syphilis; Prof. Flechsig, celebrated for his contributions to the anatomy of the spinal cord, has a clinic for psychiatry at the Insane Asylum, and Prof. Schmidt has the surgical policlinic. Courses in physical diagnosis, in the use of the ophthalmoscope, the laryngoscope, etc., are given by the "Privat Docenten," and others.

While the clinical advantages are, as I have shown, good, yet it is for the departments of pathology, physiology, and anatomy, that Leipsic is chiefly frequented by foreign students. The laboratories are commodious and well appointed, the instructors among the most eminent in their profession, and every facility and courtesy is offered to those who want to work and study.

Living is cheap here, lodgings costing from $3.75 upwards—a very good room may be had for $6 a month, or even less; meals may be taken either in the house, by special arrangement, or, as most students do, at restaurants. The city in itself presents many attractions, there being an excellent opera and three theatres, besides the weekly concerts of the celebrated Conservatory of Music.

Very truly yours,
WALTER MENDELSON.

LEIPSIC, March 2, 1882.

NEWS ITEMS.

BUFFALO.

(*From our Special Correspondent.*)

ATTEMPTED ASSASSINATION OF DR. JOHN P. GRAY.—Dr. Gray returned on Thursday night, at 5.45, from Washington, where he had been examining, with District Attorney Corkhill, the medical portion of the bill of exceptions in the Guiteau case. After taking tea, he came down to his private office, and sent a messenger to Dr. E. N. Brush for his mail, which had accumulated in his absence. Dr. Brush carried it across the hall to him, and stood for a few moments at his left hand, explaining to him the nature of some of the letters, and how far he had answered them. When he left the office, at five minutes to seven, Rev. Dr. Gibson, the Chaplain of the institution, who had come to the asylum for the purpose of lecturing to the patients, was sitting at the Doctor's library-table, opposite to the Doctor; Dr. G. A. Blumer, of the staff, was standing at a corner of the table, at Dr. Gibson's right hand; Mr. John P. Gray, Jr., was standing at the right of, and a little behind his father; Dr. Gray and Dr. Gibson were discussing a translation of one of the Odes of Horace, which Dr. Gibson had recently made, and just as Dr. Brush left the office Dr. Gray reached forward and took the manuscript, and leaned over the table to examine it as it lay before him. Dr. Brush passed from the office into the wards, with Dr. Josselyn, another member of the staff, to see a sick patient. During Dr. Brush's absence, and within a very few minutes after he had left the Doctor's side, the would-be assassin entered the front door of the asylum, passed down the main hall to the Doctor's office, stepped just within the door, and, without a moment's hesitation, drew a large navy revolver, carrying a No. 38 calibre ball, and fired. Turning upon his heel, he hurriedly retraced his steps, and passed out the front door. He was followed by Dr. Blumer and Mr. John Gray, and as they stepped out upon the portico, he, having preceded them a few feet down the lawn, turned and fired another shot, and disappeared in the darkness.

When Dr. Brush reached Dr. Gray, he had gone up-stairs to his bath-room on the floor above. He found him bleeding somewhat profusely from the nose and mouth from the bullet wound. The ball had entered over the left malar bone, a half an inch below the outer angle of the eye, and made its exit in the centre of the right cheek, an inch and a half below the outer angle of the right eye, and half an inch back of a vertical line drawn from that point. The left side of the face was filled with powder, so closely had the pistol been fired to his face. A hurried examination satisfied Dr. Brush that the hæmorrhage through the mouth came from the posterior nares, and that no important vessels were wounded. In a short time active hæmorrhage ceased, although oozing continued for some hours. The left eye was almost immediately closed by the infiltration of blood in the tissues surrounding it, and in a short time the right eye was in a similar condition, and the whole face swollen and distorted. As soon as the trickling of blood into the pharynx ceased, the doctor was placed in bed. There was no shock, the temperature remaining normal, and the pulse not rising above 90. The Doctor exhibited remarkable coolness and fortitude. As far as he was able, he directed what should be done, and gave the officers valuable hints in regard to the prob-

able assailant. Since the injury he has done better than was anticipated. He has taken light food in sufficient quantity, his pulse has not exceeded 90, and his temperature has not risen above 100°, and only once has it risen to that point. Of course his attendants are anxious and somewhat apprehensive, but hope for the best.

The assassin was Henry Remshaw, a veteran soldier, aged forty-six years. Immediately after committing the deed he went to the house of a Mrs. Yearhling. He appeared laughing, and said he had had a row, and had "done it at last." Mrs. Yearhling told him to come in and shut the door. He did so, and she asked, "Henry, what have you done?" Remshaw capered about the apartment as though in high glee, and finally answered, "Well, I've killed Dr. Gray at last. I am going to give myself up, and I will be away for a few days." After exhibiting pistols and knives, he left, and soon the police came. Remshaw appears to have proceeded directly to the Mohawk Street Jail, where he found Mrs. Appleton, the jailer being absent. The lunatic approached the jailer's wife and asked for her husband. Mrs. Appleton replied that he would return shortly. Remshaw said, "I've shot a man. I didn't kill him, but it's all right sure enough. I shot Dr. Gray." When the jailer returned, Remshaw said, coolly, "Well, Bill, God delegated me to kill Dr. Gray, and Capt. Jones told me to give myself up to you. I shot Dr. Gray in the face." Mr. Appleton asked Remshaw whether he had any arms about him, and Remshaw produced the following: Two large navy revolvers, loaded; one four-barrel repeater, loaded; one heavy calibre derringer, loaded; one revolver; one heavy Spanish dirk-knife; twenty-one packages of forty-four calibre cartridges, six in a package; two cases of large cartridges; one bottle acetum opii; one bottle of oil; two revolver cleaners.

The jailer telephoned to the Police Station, and Assistant Chief McElwaine despatched Officer Latham to the jail for the prisoner. He walked to the station house quietly, being handcuffed to the officer. He conversed calmly about his crime, and expressed no regrets. During the night he slept most of the time.

WASHINGTON.

(From our Special Correspondent.)

THE NEW NATIONAL MUSEUM AT WASHINGTON, D. C.—For a number of years the establishment of a national museum at Washington has been a favorite project with the distinguished head of the Smithsonian Institution, Prof. Spencer F. Baird. He, more than any other person, from his long connection with the Smithsonian Institution, appreciated the importance and necessity of such an enterprise. There existed in the collections of the Smithsonian many aggregations of practical and scientific value which could not be made generally available in consequence of the want of space in which to manipulate and display them. This disadvantage was long felt, but when so many large and valuable collections were donated to the United States by foreign governments, from the Centennial Exhibition, additional space became an absolute necessity. These contributions could not even be unpacked from their boxes for want of room, being stored in an old building near the Smithsonian known as "the armory," where they were in danger of being damaged from want of proper care. To meet this need, Congress, in 1880, appropriated $250,000 for a national museum. A Building Commission was appointed by the Regents of the Smithsonian, consisting of Prof. Baird, Gen. Sherman, and Hon. Peter Parker, by whom careful plans were drawn up, and the money expended in building the present structure.

The Museum adjoins the Smithsonian building on the east, and is two hundred and twenty-seven feet square—covering two and a quarter acres of ground. The energy with which the work was pushed is indicated by the fact that in one year after the appropriation was made, the building was under roof, and on March 4, 1881, Mr. Garfield's inaugural reception was held in it. It is one of the largest museum buildings in the world, and if the plans entertained for the future are realized, the Museum will compare favorably, if indeed it does not excel in usefulness, the British Museum itself. This building is unique in one particular—that it is all under one roof, all on one floor, and all in one room, the partitions into halls being made of the exhibition cases. It has a capacity of 1200 to 1500 large exhibition cases, which will vary in pattern to suit their varied contents. About 250 have already been received, and are being rapidly placed in position. At the four corners, and over the four main entrances of the edifice, are towers containing offices, laboratories, and working-rooms to the aggregate number of 160—all now full of workers.

Prof. G. Brown Goode, the assistant curator, is an indefatigable worker, upon whom devolves the executive management of the exhibits, under the supervision of the curator, Prof. Baird. Prof. Goode is specially adapted to his work, has no end of enthusiasm, and is rapidly bringing order out of chaos. He states the objects of the Museum to be threefold:

1. To gather material for original investigations.
2. To preserve as matters of record materials upon which past investigations are based.
3. To prepare for the use of the people of the United States an educational museum of the most liberal and comprehensive kind, in which fundamental facts in every department of human activity shall be illustrated by a series of well-chosen specimens, the meaning of which shall be explained by descriptive labels.

Ideas which cannot be illustrated by specimens, will be demonstrated by means of diagrams and pictorial representations.

This indicates the broad scope of work laid out, and the possibilities of usefulness cannot be overestimated. Some conception of the immense value of such a collection to the people may be formed from the fact that even in its present incomplete condition there were over 200,000 visitors to the Museum last year.

The authorities propose that every facility shall be given to persons desiring to study closely any of the exhibits; and where such persons come properly accredited, with an earnest desire to investigate, not only will they have access to the specimens, but will also have the privileges of laboratory facilities extended to them.

The following is a list of the officers of the Museum, and of the departments and sections, with the names of the gentlemen in charge of each, as far as at present determined:

Divisions of Exhibits.—Director of Museum, S. F. Baird; Assistant Director of Museum, G. B. Goode; Department of Arts and Industries, G. B. Goode; Department of Fishes, T. H. Bean; Department of Mollusk, Wm. H. Dall, E. C. Stearns, Assistant; Department of Minerals and Economic Geology, George W. Hawes, F. P. Dewey, Assistant; Section of Materia Medica, I. M. Flint; Section of Foods, I. Howard Gore; Department of Marine Invertebrates, Richard Rathbun; Department of Antiquities, Charles Rau; Department of Birds, Robert Ridgway; Department of Insects, C. V. Riley; Section of Bird Skeletons, R. W. Shufeldt; Department of Mammals and Librarian, F. W. True; Department of Fossil Plants, Lester F. Ward; Chemist, F. W. Taylor; Department of Reptiles, H. C. Yarrow.

There are three sections of the Museum which are of

special interest to the medical profession, namely, 1. The Section of Materia Medica, Surgical Appliances, Clinical Thermometers, Pharmaceutical Apparatus, etc.; 2. The Section of Food Products; and, 3. The Section of Chemistry and Laboratory Apparatus.

The Section on Materia Medica, which is one of the greatest interest to the medical profession, is under the care of Surgeon I. M. Flint, U. S. N., who was detailed for the purpose by the Surgeon-General of the Navy.

Dr. Flint has shown himself to be eminently qualified for the position, and is developing the material in his hands to its highest practical usefulness.

It is intended that the Materia Medica collection shall be made as complete as enterprise, industry, and expense render possible; for, although the collection will be largely composed of gift contributions, still, where it becomes necessary to fill out a series in any direction by purchase, expense will not be spared.

The size of the Museum-building insures abundant space for display, and much time has been bestowed upon the arrangement, in order that the collection may be shown in the most advantageous manner.

The bottles have been made to order of clear white glass, and are, as nearly as can be, of uniform size. The specimens are furnished by donation from the firm of Schieffelin & Co., of New York, who have already forwarded about fifteen hundred packages and bottles.

It is proposed to display the drugs in groups, showing the crude drug with all its preparations, alkaloids, etc., except such as are perishable and cannot be preserved in a collection. No proprietary medicines will be given a place unless accompanied by the formula, and then only when sufficiently well known to be of general interest.

The following circular, prepared by Dr. I. M. Flint, and just issued by the Museum, gives the classification and arrangement of the Materia Medica collection adopted:

Primary Divisions.—I. Inorganic Materia Medica. II. Organic Materia Medica. 1. Vegetable products; 2. Products of fermentation and distillation; 3. Animal products.

I. Medicines of the inorganic division, to be classified according to their fundamental elementary constituents, following the order of the elements given in Roscoe and Schorlemmer's *Treastise on Chemistry*.

With each elementary substance to be arranged—

1. The chemical compounds of that element used in medicine and pharmacy.

2. The preparations of which that element, or any of its compounds, constitutes the fundamental ingredient.

These preparations to include—

a. The official preparations of the United States Pharmacopœia.

b. The official preparations of foreign pharmacopœias which are not recognized by the United States Pharmacopœia.

c. Unofficial preparations which are considered to be of sufficient importance or interest to be worthy a place in the collection.

Poisonous salts, liable to be mistaken, on account of similarity of appearance, for those less active, should be shown with the latter also.

II. 1. Medicines of vegetable origin to be classified according to the botanical affinities of the plant from which derived, following the sequence given in Bentham and Hooker's *Genera Plantarum*, beginning with the lowest order.

Under each natural order to be arranged—

A. The official drugs derived from each plant of that order.

B. Drugs not official in any pharmacopœia, but which are or have been used in medicines.

With each crude drug to be displayed—

a. A colored plate of the plant from which it is derived, with figures illustrating its botanical characters.

b. A specimen of the flowering plant, pressed and dried, in the usual manner of an herbarium.

c. The drug in all its varieties, commercial and botanical. These specimens primarily should be fair commercial samples, such as will honestly represent the article as found in the market. They may be supplemented by carefully selected, or rare samples, or by those adulterated or possessing interesting peculiarities of any kind. The commercial and botanical sources of each should be authenticated. The practical value of the collection will largely depend upon the completeness and accuracy of this portion of the exhibit.

d. Sections of roots, stems, barks, etc., to show structure, fracture, or other physical characters that may assist in their identification, with drawings of the same, magnified if necessary.

e. Preparations, official and other, of which the drug or any product of the drug constitutes the fundamental ingredient.

2. Products of fermentation and distillation will include the products of the acetous and vinous fermentations, and the derivatives chloroform, ether, etc., as well as distillates, such as carbolic acid, pyroligneous acid, etc.

3. Medicines of animal origin to follow the usual classification of the animals from which the crude drug is obtained.

Each group of specimens, arranged under one head, to have a descriptive card, giving in brief terms the most important facts relating to general character, source, commercial varieties, etc.

Each specimen to have its label, giving scientific and vernacular names, and such special information as can be condensed within the prescribed limits.

It is intended that the labels shall be plain enough to be comprehended by all visitors, while, at the same time, technically correct.

The following is a sample of the label prepared for aconite:

ACONITE ROOT.

Aconitum, U. S.

The roots of aconitum napellus, *Lin.* An herbaceous perennial of the order *Ranunculaceæ*, growing in the mountainous districts of Europe, Asia, and Western North America. Contains aconitia, pseudaconitia, aconina, etc.

Anodyne, sedative, poisonous. Dose, 0.06 to 0.12 grams.

No. 49,560.—Gift of W. H. Schieffelin & Co. Arranged by the Medical Department of the Navy.

There is also a collection of Chinese drugs, comprising 625 specimens, well preserved, which were sent to the Centennial Exposition by the Chinese Government, and afterwards presented to the United States.

In June, 1881, a circular was issued by Prof. Baird through the State Department to U. S. Ministers, and through the Navy Department to Naval Medical Officers, requesting information as to the pharmacopœias in use in different foreign countries. Most countries were heard from, and through the information so obtained the books were sent for, and the Library of the Museum has now about twenty different pharmacopœias, representing Great Britain, France, Germany, Mexico, Denmark, Holland, Belgium, Sweden, Norway, Russia; Austria, Switzerland, Greece, Spain, Portugal, Hungary, India, and United States. Asia has no special pharmacopœia, except British India. Africa has none. South America has none. In South America the French, German, and United States pharmacopœias are in use; in fact each druggist appears to use that of his own nationality. A study of these

authorities sufficiently illustrates the necessity for an International Pharmacopœia.

Dr. Flint is now engaged in making a critical comparative examination of these pharmacopœias, and tabulating a list of the preparations found in each. The object of making this list is for convenience in completing the Museum collection, but the results of his labors in this direction will be published as a Report in the Proceedings of the National Museum in due time.

The section of Food Products is intended to show all foods in different stages of preparation; all beverages, whether nutritious, stimulant, or narcotic, from all parts of the world. As a nucleus of this collection, a series of standard food substances of the United States is now being contributed by the firm of H. K. & M. B. Thurber, grocers, of New York. There is also a series of Chinese foods, 500 in number, from the Centennial Exposition, and a large collection of foods of North American Indians, gathered by the various Government expeditions. Steps are being taken to secure like exhibits from all parts of the world through authorized collectors of the National Museum. These products will be labelled with the common names, and the scientific name of the substance from which derived; the chemical composition will be given; description of preparation; statistics of production, etc.

As adjunct to this section, practical illustrations will be introduced, such as a day's ration of people of different occupations—for instance, a day-laborer. Casts will be shown of the proper amount of each kind of food, as bread, potatoes, beef, butter, and milk. In the same connection, the manner of cutting up various food-animals will be shown by casts—for example, a side of mutton, showing the different cuts, the chemical composition, and nutritive value of each portion on special labels. This can manifestly be made of great value to physicians, as in the case of foods for invalids and infants alone. The analysis and food value of each will be given with the specimen.

In chemistry, there is a complete series of chemical elements obtained from Schuchardt, of Dresden.

Powers & Weightman, of Philadelphia, are now preparing, as a donation, specimens of every known chemical compound obtainable in a pure state.

Methods employed in chemical processes will be shown in the progressive stages of preparation, as far as possible, and a full assortment of chemical apparatus will be kept on exhibition.

THE PUBLIC HEALTH.—For the *week ending March 11*, the number of deaths from *small-pox*, not previously published, were as follows: Brooklyn, 2; Hudson Co., N. J., 6; New Orleans, 6, and Richmond, Va., 2. In the latter place, 13 new cases were reported during the week. There were no deaths from this cause in San Francisco during the week ending February 25, and but 2 in the succeeding week. *Cerebro-spinal meningitis* caused 2 deaths in Hudson Co., N. J.; 6 in Buffalo, and 3 in Detroit. *Diphtheria* is still on the increase in Brooklyn, 17 deaths being reported, against 9 and 14 the two previous weeks; 6 in Hudson Co., N. J.; 4 each in Buffalo and Detroit, and 2 in the District of Columbia. There were 28 deaths from *scarlet fever* in Brooklyn; 6 in Hudson Co.; 5 in Detroit, and 4 in Buffalo. *Measles* is present in Brooklyn, Hudson Co., Buffalo, Detroit, and San Francisco; but in no place, except San Francisco, is the mortality significant. An excess of deaths from *puerperal diseases* is noticed in Hudson Co., where the number reached 10, compared with 7 in Brooklyn, 5 in Buffalo, and 1 each in the District of Columbia and Detroit. For the weeks ending February 25, and March 4, the aggregate of deaths from *consumption*, *bronchitis*, and *pneumonia*, was, respectively, 36.66 and 34.4 per cent. of the total mortality. During the fortnight there were 3 deaths from diphtheria, 3 from typhoid fever, 11 from measles, 4 from scarlet fever, and 2 from small-pox.

For the *week ending March 18*, the principal causes of death in a number of prominent places throughout the country were as follows:

Small-pox.—There were 12 deaths from this cause in New York City; 10 in Philadelphia; 1 in Boston; 1 in St. Louis; 33 in Cincinnati; 3 in Hudson County, N. J.; 1 each in Wilmington, Del., and Memphis; 11 in Pittsburg, with 44 new cases reported; 6 in Allegheny, Pa.; and 8 new cases but no deaths in Dayton; 3 in Milwaukee, and 3 new cases; and 5 new cases and no deaths in Brooklyn. In all these places the disease does not appear to be making any headway, the records showing but a slight change as compared with those of the preceding week. In South Bethlehem, Pa., the progress of the epidemic of small-pox appears to have been checked. Within the past two weeks, the period covering the outbreak of the disease, about 250 cases have been reported, but the precise number of deaths has not been ascertained; the mortality, however, is reported to have been 32. From the 17th to the 20th, inclusive, 18 deaths have occurred. The Chief Burgess states, officially, that "not a single case of small-pox has occurred where there had been recent successful vaccination." Within the past few days a very general vaccination of the inhabitants has taken place, and a rapid abatement of the epidemic may be looked for, though cases of the disease may yet develop from among those exposed to the infection previous to vaccination. The alarm created throughout the Lehigh Valley has caused a very general resort to vaccination, so that the experience of South Bethlehem is not likely to be repeated in that district.

Cerebro-spinal Meningitis.—In fifteen places, with an aggregate population of about 3,850,000 inhabitants, the total number of deaths from this disease during the week amounted to 14. These deaths were distributed among seven cities, as follows: New York City, 3; Philadelphia, 1; St. Louis, 2; Cincinnati, 2; Indianapolis, 2; Pittsburg, 1; and Milwaukee, 3.

Diphtheria.—A slight decrease in the deaths from diphtheria is noticed in New York City; and an increase in the number in Philadelphia, Boston, and Hudson County, N. J. The record for the week is as follows: New York City, 36; Brooklyn, 10; Philadelphia, 13; St. Louis, 3; Boston, 11; Providence, R. I., 1; Hudson County, N. J., 9; Pittsburg, 2; Milwaukee, 1, with 4 new cases.

Scarlet Fever.—There was no abatement of this disease in New York City, where there were 81 deaths against 79 in the preceding week. The disease is nearly stationary in Philadelphia, where there were 8 deaths. In St. Louis there was an increase from 1 the previous week to 7 this week. There were no deaths in Boston, but 5 new cases were reported. Hudson County, N. J., reports 9 deaths; Brooklyn, 26; Pittsburg, 3; Louisville, Wilmington, Del., and Charleston, each 1. 18 new cases were reported in Milwaukee.

Typhoid and Typhus Fevers.—Typhoid fever is still quite prevalent in Philadelphia, though there was a slight improvement in the death-rate from this cause. There were 11 deaths during the week; 8 in New York; 5 in St. Louis; 3 each in Boston, and Hudson County, N. J.; 2 in Milwaukee; and 1 each in Louisville, Charleston, Pittsburg, Indianapolis, Providence, Wilmington, Del., and New Haven. Only 1 death is reported from typhus fever, and that occurred in New York City.

Both *measles* and *whooping-cough* are prevalent in New York City, and the latter disease in Boston. From measles there were 15 deaths in New York; 5 in Brook-

lyn; 2 in Philadelphia; and 1 in Boston. Whooping-cough caused 18 deaths in New York; 3 in Brooklyn; 2 each in Philadelphia and Cincinnati; 8 in Boston; and 1 each in Providence, Pittsburg, and Indianapolis.

There were 6 deaths from *puerperal fever* in St. Louis, where none were reported the preceding week, 3 in Brooklyn, and 2 in Pittsburg. *Consumption* and *acute pulmonary diseases* still maintain a high death-rate.

The total number of deaths in Memphis in the month of February was 77. Of this number small-pox caused 5 deaths; malarial fever, 2; diarrhœal diseases, 2; consumption, 15; pneumonia, 12; and bronchitis, 3. Thirty-three per cent. of the mortality was of children under five years of age. The proportion of deaths among colored and whites was as 50 to 27.

HEALTH IN MICHIGAN.—The State Board of Health Bulletin states that for the week ending March 11, 1882, the reports indicate that pneumonia and bronchitis have increased, and that influenza, rheumatism, neuralgia, and intermittent fever have decreased in area of prevalence.

Bronchitis and pneumonia seem to have decreased, and influenza and rheumatism to have increased in area of prevalence with the rise in temperature and humidity, and falling off in ozone during the week ending March 4, and again to have increased, and decreased respectively during the following week (ending March 11) with the fall in temperature and humidity, and the rise in ozone.

Diphtheria was reported present during the week ending March 11, and since, at 28 places; scarlet fever at 14 places; measles at 10 places; and small-pox at 2 places, as follows: at Detroit, March 11, at Spalding, Menominee County (2 deaths), and among the Indians near Spalding, March 15, 1882. At Stanton, Montcalm County, is one case of eruptive disease following vaccination which may be mild varioloid.

PREVENTION OF THE INTRODUCTION OF CONTAGIOUS DISEASES.—At a special meeting of the Michigan State Board of Health, held at Ann Arbor, March 1, 1882, the following preamble and resolutions were adopted:

Whereas, Measures for the prevention of the introduction of diseases from foreign countries into the United States are of national importance, affecting not only the seaboard and gulf States, but also States in the interior, as evidenced a few years since by the wide-spread disaster from yellow fever, and recently by the wide diffusion of imported small-pox; therefore,

Resolved, That in the judgment of this Board, such measures should be continued by the National Board of Health, and undertaken by the United States Government, as will best and most effectually prevent the introduction of diseases into the United States.

Resolved, That our Senators and Representatives in Congress be, and they hereby are, respectfully and earnestly requested to use their influence towards securing any appropriate legislation which may be necessary to this end.

The following preamble and resolutions were also adopted:

Whereas, The prevention of the introduction of yellow fever into the United States is a subject of national importance,

Resolved, That in the opinion of this Board it is proper for the Louisiana Board of Health to ask, and it is the duty of the National Board of Health to continue to give, aid in the prevention of the introduction of yellow fever into the Mississippi Valley.

Resolved, That—because of the duties of the National Board of Health, in aiding the prevention of the introduction of yellow fever, and in giving accurate information to all States interested in the sanitary condition of the Mississippi Valley—1. An inspector of the National Board of Health should be placed at Eadsport, to act conjointly with the officer of the State Board of Health, in securing the exclusion of infected vessels from the Mississippi River, and in notifying such vessels that they must be thoroughly disinfected. 2. That a representative of the National Board of Health should be stationed at the Mississippi River Quarantine Station. 3. That it is the duty of all health authorities in Louisiana, and in the gulf States, promptly to communicate to the National Board of Health any and all possible information relative to the occurrence of yellow fever, or of a case which may be suspected to be yellow fever, and in every possible way to aid the National Board of Health to perform its duties in giving accurate information for the guidance of State and other Boards of Health throughout this country.

MEDICAL COLLEGE COMMENCEMENTS.—The Annual Commencement of Bellevue Hospital Medical College was held in New York on the 15th of March, and the degree of M.D. was conferred on 163 graduates. Dr. J. S. Billings, U. S. A., delivered the address to the graduates.

The Twenty-second Annual Commencement of the Miami Medical College took place on March 9, 41 diplomas being granted.

The Commencement Exercises of the Medical Department of Nashville and Vanderbilt University were held on February 25, 168 medical diplomas being conferred.

The Seventy-fifth Annual Commencement of the University of Maryland was held on March 1, 69 degrees in medicine being granted.

The Tenth Annual Commencement of the College of Physicians and Surgeons, in Baltimore, was held on March 1, 151 degrees being granted.

The Baltimore Medical College held its First Commencement on March 7, and conferred 17 degrees, one being to a woman.

The Twenty-fourth Annual Commencement of the Atlanta Medical College was held on February 27, and the degree of M.D. was conferred on 57 graduates.

The Thirty-ninth Annual Commencement of the Rush Medical College was held on Feburary 21, when 179 degrees were conferred.

The Annual Commencement of the Columbian University was held at Washington on March 16, and the degree of M.D. was conferred on 8 candidates.

THE MUSCULAR FORCE OF A CROCODILE'S JAW.—An experiment has been lately made in Paris by Drs. REGNARD and BLANCHARD on the measurement of the power exerted by the masseter muscle in a crocodile. Ten live crocodiles of the species *C. galeatus* or *siamensis*, that had been sent in large cases from Saigon to M. Paul Bert, afforded the opportunity for such experiments. Some of these animals were as much as 10 ft. in length, and weighed about 154 lbs. The difficulty of managing such creatures in the laboratory was, of course, considerable. The crocodile was fixed with ropes on a heavy table; the lower jaw kept in contact with the table by a cord, while the upper was raised by means of a cord attached at the extremity and passing up to a beam overhead. A dynamometer was inserted in this cord, and was affected when the animal was stimulated with an electric current. In this way, a crocodile of about 120 lbs. weight gave an indication of 308 lbs. (140 kilogrammes). The application of the cord at the end of the snout was necessary but unfavorable, seeing the application of the force is thus at the end of a long lever, and there is at least five times more space between this point and the insertion

of the masseter muscle, than between the latter and the joint of the jaw—the fulcrum. Hence the masseter really produces a force five times that indicated by the dynamometer, or about 1540 lbs. (700 kilogrammes). This extraordinary force, it should be remembered, was that of an animal somewhat weakened and at a low temperature. The force (of about 308 lbs.) is really applied at the end of four large teeth that project beyond all the others, and, considering the surface here represented, the authors estimate the pressure, while the bite is executed by the extremity of those teeth, at nearly 400 atmospheres. Making similar experiments with an ordinary sporting dog, they obtained in the dynamometer a pressure of about 72 lbs.; while the effect at the insertion of the masseter was about 360 lbs. The pressure at the point of the canine teeth would be about 100 atmospheres. It is calculated that the crocodile is about one-third stronger than a dog of the same weight would be.—*London Med. Record*, Feb., 1882.

THE NEW YORK CODE.—The Medical and Surgical Society of Montgomery, Alabama, at its meeting, held on Wednesday, March 8, had its attention called to the new code of the New York State Medical Society by its President, Dr. R. F. Michel, and Dr. Wm. O. Baldwin, with some eloquent prefatory remarks, offered the following preamble and resolutions:

Whereas, We, the members of the MEDICAL AND SURGICAL SOCIETY OF MONTGOMERY, have noticed with deep regret that the Medical Society of the State of New York, at its recent meeting, in February last, established a code of ethics which is in direct conflict with a material part of the laws and regulations established by the American Medical Association, therefore,

Resolved, *First*, That all the changes, mutilations, additions, omissions, or transpositions, made, or attempted to be made, by the Medical Society of the State of New York in the laws and ethics established by the American Medical Association are either unnecessary and unauthorized, or unwise and mischievous, and deserve the condemnation of all good men in the profession.

Second, That the declaration of principles contained in the "Rules governing Consultations," as adopted by the New York State Medical Society, in which they assert the right to "meet in consultation *legally* qualified practitioners of medicine," without further qualification or restriction, is directly at war with the expressed provisions of the Code of Ethics established and recognized by the American Medical Association, and in its scope and tendencies calculated to break down the barriers which have so long existed between the learned and scientific physician and the vain and ignorant charlatan. In that we all know that amongst the "*legally* qualified physicians" of every State in the Union are to be found the most arrant quacks and mountebanks, and that by thus offering them this seeming equality, we would be giving to them a countenance and respectability which would enable them to ply their nefarious vocation with greater success to themselves, and corresponding injury to the public.

Third, That Art. iv., Sec. 1, of the Code of Ethics, though sufficiently clear and defined in the original enactment, is still further explained in the preamble and resolution found in vol. xx., p. 30, of the *Transactions*, and reads as follows: "*Whereas*, The proper construction of Art. iv., Sec. 1, Code of Ethics, American Medical Association, having been called for relative to consultations with irregular practitioners, who are graduates of regular schools; *Resolved*, That said Art. iv., Sec. 1, of Ethics of American Medical Association excludes all such practitioners from recognition by the regular profession."

Fourth, That the Code of Medical Ethics is a part of the constitution or plan of organization adopted by the American Medical Association, and enters into its organic law, and is above State organization; and that all physicians who are members of the American Medical Association, or who belong to societies in affiliation with that body, are bound by its obligations and restrictions, and, therefore, amenable for violation of its laws; and that even if such were not the case, it would be unwise to disturb a custom so salutary to the profession, and which has been approved and sanctified by the wisdom and experience of ages.

Fifth, That we see no necessity for any change in the Code of Ethics as at present constituted by the American Medical Association; that, embodying, as it does, the ethical laws which should regulate the intercourse of physicians of the United States with each other and the public, its provisions are wise, its scope ample, its restrictions comprehensive, just, and honorable; and, if change or amendment should be deemed necessary, this can only be properly effected through the power which has long been acknowledged as the only one to exercise supreme control over its provisions, and that, according to its express terms, this can only be done "at the annual meeting next subsequent to that at which such amendment or alteration may have been proposed, and then only by the voice of three-fourths of all the delegates in attendance."

Sixth, That as the action of the Medical Society of the State of New York is without a precedent for this strange departure from our time-honored code of laws, we trust it may remain without a following, and that the American Medical Association, at its approaching annual meeting, will put its seal of condemnation upon their action in a manner calculated to vindicate its own dignity and honor.

Seventh, That we deeply sympathize with the noble minority who fought against this cruel and suicidal action of the majority of the Society; that we share their mortification, and that we express the hope that they will at once call a convention of such men in the State as may be willing to unite with them in forming another State Association, composed of material that will be readily admitted to fellowship in the American Medical Association, in order that the State may not be without its proper representation in that body at its meeting at St. Paul in June next.

These resolutions were seconded by Dr. J. S. Weatherly; and, after approving remarks by Drs. J. B. Gaston, S. D. Seelye, Jones, Owen, Johnston, Blue, Jackson, and Lee, were unanimously adopted, and it was directed that they be forwarded to THE MEDICAL NEWS for publication.

SANITARY CONVENTION.—A Sanitary Convention, under the auspices of the State Board of Health, will be held in the city of Greenville, Michigan, on Tuesday and Wednesday, April 11 and 12, 1882.

There will be addresses or papers on subjects of general interest pertaining to public health, each paper to be followed by a discussion of the subject treated.

The officers of the Convention are as follows: President, Rev. J. L. Patton, Greenville; Vice-Presidents, Hon. E. H. Stanton, Ionia; Rev. A. A. Brown, Greenville; Hon. H. H. Hinds, Stanton; Charles P. Bigelow, M.D., Big Rapids; Hon. J. P. Shoemaker, Amsden; Hon. R. C. Miller, Greenville; Secretary, Charles S. Sheldon, M.D., Greenville.

Manufacturers of sanitary apparatus or appliances, and dealers in the same or in any article conducive to health, are invited to send samples of their wares for exhibition at this Convention, in accordance with the regulations.

Judges will be appointed to examine the various arti-

cles on exhibition, and certificates of merit will be awarded to such articles as are deemed worthy.

Among the subjects which it is desired to have presented and discussed are the following:

1. The Prevention and Restriction of Small-pox, Diphtheria, and Scarlet Fever.
2. The Present and Prospective Water-supply of Greenville.
3. The Disposal of Decomposing Organic Matter.
4. Pure Air; Why we should have it, and How we shall get it.
5. School Hygiene.
6. The Relation of the Newspaper Press to Sanitary Reform.

The papers read are expected to be original contributions, which when read are to be considered the property of the Convention.

THE BRITISH MEDICAL PROFESSION.—According to the official *Medical Register*, the roll of the profession in Great Britain includes 23,275 registered persons.

DR. ROBERT P. HARRIS, of Philadelphia, has received the honor of an election to Corresponding Membership in the Reale Accademia Medico-Chirurgica, of Naples, Italy.

LITERARY NOTE.—The first regular medical journal was published in Paris in 1679, and was entitled *Les Nouvelles Dèconvertes sur toutes les parties de la Médecine.*

COMPETITION FOR MEDICAL APPOINTMENTS.—In filling the position of surgeon to the Great Western Railway, England, a position worth £600 per annum, the authorities were obliged to make a selection from over 600 candidates.

A NEW street in the neighborhood of the General Hospital in Vienna is to bear the name of Skoda Street (*Skodagasse*), in honor of the celebrated physician and clinical professor.

OBITUARY.

DIED at Vienna, Prof. A. Duchek, Professor of Internal Medicine in the University of Vienna, on March 2, at 4½ o'clock, P.M. He had been ill for two weeks. Dr. Kretschky, his assistant, and Dr. Barbien, one of Prof. Billroth's assistants, were his attending physicians. Prof. Bamberger was called in consultation. He suffered from fatty degeneration of the heart, but no immediate fatal result was expected. Upon March 1 symptoms of gastric catarrh were noticed, and this complication proved to be the forerunner of the immediate cause of death, cardiac paralysis. He was perfectly conscious up to the time of death. On Thursday, at 3 o'clock, P.M., he spoke to his wife, who was pouring out some wine. Shortly after this his wife, with Dr. Kretchy, left the room, an old nurse, for eleven years actively engaged in Prof. Duchek's wards, alone remaining. At 3½ o'clock, P.M., the nurse noted alarming appearances, and hurriedly summoned the wife and attendant physician. Prof. Duchek died peacefully an hour later.

Prof. Duchek was a Knight of the Franz-Joseph Order; he leaves behind him a widow, the sister of the body-physician of the Queen of Spain, Hofrath Dr. Ritter von Riegl.

Adalbert Duchek was born in Prague, 1824; his father was one of the most celebrated physicians in Prague. He completed his training in arts and sciences in the Prague Gymnasium, and received his medical degree, in 1848, from the University of his native city. After his appointment as second physician in the Prague Lunatic Asylum, he studied pathological anatomy very closely for the space of two years. He left the Lunatic Asylum to become the Assistant in Internal Medicine of Prof. Hamminik.

In 1855 he was appointed Professor of Internal Medicine in the Lemberger University. In 1856 he was elected to the same Professorship in Heidelberg. Two years later he was recalled to Vienna, and appointed to the Chair of Internal Medicine in the "Joseph Akademie," a military medical school, which has since been united with the Medical Department, University of Vienna.

In 1871 Skoda retired from active work, and Oppolzer, Skoda's successor, warmly recommended Duchek's election to the second professorship in Internal Medicine, made vacant by Oppolzer's promotion. He was elected. After Oppolzer's death, Duchek was appointed First Professor, Internal Medicine, University of Vienna. Most of Duchek's extended scientific work was performed while professor in the Military Medical School "Joseph Akademie." As a practitioner he was very widely known throughout Continental Europe, and, at one period, enjoyed the most lucrative and distinguished practice in Vienna. Through his labors he amassed a large fortune. Personally, he was beloved by his colleagues and universally admired by his students. His loss, as the most distinguished of Skoda's pupils, is greatly felt by the Faculty and Direction of the "K. K. Allgemeines Kraukenhaus."

Prof. Schroetter is popularly named as his probable successor. This gentleman is known to Americans chiefly by his studies in laryngology.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MARCH 14, TO MARCH 20, 1882.

BROWN, H. E., *Major and Surgeon.*—Having reported at these Headquarters, will proceed to Jackson Barracks, La., and report to the Commanding Officer for duty.—*S. O. 32, Department of the South, March 14, 1882.*

PORTER, JOSEPH Y., *Major and Surgeon.*—Granted leave of absence for one month, with permission to apply for an extension of one month.—*S. O. 32, C. S., Department of the South.*

The following named officers of the Medical Department will report in person to the President of the Medical Examining Board, in session in New York City, for examination for promotion, and, on its conclusion, return to their stations:

Capt. WM. H. KING, *Assistant Surgeon*, Fort McHenry, Md.

Capt. H. S. TURRILL, *Assistant Surgeon*, Madison Barracks, N. Y.

Capt. W. REED, *Assistant Surgeon*, Washington Barracks, D. C.

Capt. H. S. KILBOURNE, *Assistant Surgeon*, Fort Porter, N. Y.

Capt. M. W. WOOD, *Assistant Surgeon*, Fort Brady, Mich.

Capt. R. W. SHUFELDT, *Assistant Surgeon*, Washington, D. C.

Capt. H. O. PERLEY, *Assistant Surgeon*, Fort Columbus, N. Y. H.

Capt. H. G. BURTON, *Assistant Surgeon*, Fort Hamilton, N. Y. H.

Capt. L. M. MAUS, *Assistant Surgeon*, at expiration of his present leave of absence, and then to return to his proper station, David's Island, N. Y.

Capts. WM. H. CORBUSIER and WM. B. DAVIS, *Assistant Surgeons*, at the expiration of their present leave of absence, and upon conclusion of their examination, to report by letter to the Surgeon-General.—*S. O. 58, A. G. O., March 13, 1882.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

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ORIGINAL LECTURES.

CLINICAL LECTURE ON ACUTE CATARRHAL PNEUMONIA.

Delivered at Philadelphia Hospital,

BY JOHN M. KEATING, M.D.,

VISITING OBSTETRICIAN TO THE HOSPITAL, AND LECTURER ON DISEASES OF WOMEN AND CHILDREN.

GENTLEMEN: The child which I bring before you is about fifteen months old. About ten days ago my attention was then called to it, suffering as it was from a serious cough of a croupy character, which seemed wholly laryngeal; difficulty in swallowing and some tenderness about the angle of the jaw, and very slight swelling of the tissues on the outside. An examination of the throat showed that the tonsils were enlarged and inflamed, the mucous membrane seemed throughout much congested and angry-looking, but there was at that time no membrane. There was but little fever, and the derangement was seemingly of little importance, and treatment held it for a time in abeyance. Yesterday the conditions just described again appeared with greater intensity, and I bring the case before you this morning that we may study it together.

You will notice that though the infant has an expression of sickness—that it is pale, languid, and in evident suffering—it has not the stupor which would be characteristic of some blood-poisoning. Its eyes are bright, it notices the class, and taking the subject as it lies in its mother's arms, you would say that child is sick, probably very ill, but its disease is not one in which the nerve-centres are either irritated or overcome by poisoned blood. You will notice that it has not the appearance of a high febrile state—in fact, its temperature is slightly elevated. I carefully examine the contour of the submaxillary region, and I find no evidences of swelling, nor do I find enlargement of the glands upon pressure, nor, in fact, tenderness. I notice that the return blood-current of the neck does not seem interfered with. I find the pulse quick, but firm and regular, and of moderate force, the respirations are quicker than normal. There have been no cerebral symptoms.

I examine the throat, and find the mucous membrane much congested. A glimpse, which I get after a little manipulation with this spoon-handle, leaves no doubt in my mind that there is entire absence of membrane. The anterior arches and the tonsils, though covered with glairy mucous, which is tenacious, have not that coated appearance which is so characteristic of diphtheria—the appearance of having been whitewashed—which, if you have once ever seen, you will never forget. The membrane of diphtheria is white or gray, firmly adherent to the mucous membrane, for, in fact, it forms on the mucous membrane from the subcutaneous tissue, and clings so tightly to the surface as to require force to detach it, denuding the mucous membrane of its epithelial layer. Do not imagine that every patch you see in a child's throat means diphtheria. Milk curds, or even mucus, may deceive you. As the coating of the tongue is accepted as an index to faulty intestinal secretion and gastric disturbance, an inflammation of the mucous membrane of the throat, as severe as you see it in this child, leaves with you the impression that its severity is not limited alone to that part, but must extend into the respiratory tract.

I may tell you that after careful inquiry I find that this child has no intestinal disturbances of any account; we will, therefore, give attention to its lungs, for evidently we have here the seat of a lesion severe enough to give rise to these outward signs of illness which are so prominent. I place the child upon the mother's shoulder, letting its head rest to one side, and in that way giving a straight back for an examination. Upon percussion I find upon the left side normal resonance—that is to say, normal for a child; such sounds in an adult would be considered hyper-resonant, and denote emphysema; probably in this case it is even of higher pitch than it should be for a child; if so, it will be due to obstructive disease of the other lung, and the exaggeration will be caused by the overwork at aeration; but this being elicited only by comparison with the other side, cannot be noted at present. Upon auscultation, I note the usual puerile breathing, and in addition a quantity of large, coarse, mucus râles, both upon inspiration and expiration, which become more numerous as I approach the centre of the back. Let us now examine the right chest. Here I find upon percussion of the posterior surface a lower pitch, a marked contrast to the other side. There is less of that puerile resonance which I told you was found in infants at this age; and, although you can readily notice that there is no absolute dulness, the impairment, down to the angle of the scapula, is well marked. I may tell you that I notice a want of resiliency upon this side, and I can thus establish another difference. You may note, again, that when this right side is examined and firmly pressed upon it gives the child great annoyance; this is not the case if I press, however firmly, upon the left chest.

As I listen to the point at which I noted the impairment of resonance, which, in fact, comprises the scapular region, I do not find as many mucous râles; I occasionally note them in the larger tubes, but in their place there is a harsher, more grating, too-and-fro respiratory sound, with occasionally fine crackling râles, heard in both inspiration and expiration. The air vesicles still receive and discharge air, but seemingly with greater difficulty, as the inspiratory murmur is long and rough, and the expiratory one is prolonged and equally harsh. The sounds seem close to the ear, but I cannot detect any rough rubbing murmur or vibrations that would note pleurisy, nor again any evidence of a plastic pleural deposit that would account for the impairment in percussion resonance. We certainly, then, have an inflammatory trouble to deal with, which does not present either in its rational or physical signs the symptoms of acute croupous pneumonia, nor of pleurisy, but coincides in all its features with a localized catarrhal pneumonia; in other words, with a perivesicular inflammation, resulting from an extension of the bronchitis. This means an inflammation of the connective tissue which surrounds the minute bronchi and the air vesicles, and being congested and inflamed, increases by the vivification of its nuclei, grows rapidly in size, gives us the percussion dulness, presses against the air vesicles, and so crowding them, either causes them to collapse or their inner walls to become adherent, and so diminishes their calibre as to cut off that much of the aerating surface, and throws extra work upon the other lung or the healthy portion of the one diseased. Fortunately for our study, this child has remained quiet during the examination; but should it become fretful, and finally

excite its circulation by a crying spell, and thereby require more and quicker oxygenation of blood, you would see the immediate exaggeration in all the physical signs, and the diagnosis would be rendered more easy by the positiveness of the symptoms.

Complete consolidation may take place, and the lung become carnified; there would then be absolute flatness in percussion. Such a case we have at present in the ward, in a child of two years, and which I hope, at my next clinic, to exhibit to you; but, in that case, we have the whole upper lobe principally affected. In this disease there is not usually a solid mass of consolidated lung found closely following the initial symptoms. Though the area of disease may be circumscribed, as it is in this case, scattered throughout the diseased part are to be found healthy lobules, lying side by side with those affected with the catarrhal inflammation, and then, consolidation or condensation of tissue may take place from the collapse of the vesicles of a lobule, owing to the plugging of its bronchioles by a mass of tenacious mucus. The mechanism is like to that of a a *ball* valve; expiration can readily take place, but inspired air draws the mass tightly into the narrowing canal. The mechanical element enters largely into the production of catarrhal pneumonia, and thus marked physical signs will be found with the evidence of but slight local inflammation.

I may tell you that this disease is usually found in children under five years of age; that it is usually at its outset difficult to detect, occurring as it does as a sequence to bronchitis, and that of the capillary form, that it may have on this account either a very circumscribed area or involve both lungs to a great extent, or, again, be found in different portions of the same lung. It is usually located at a part farthest from the larger bronchial tubes, and very seldom does it present the solid mass of consolidated matter so circumscribed and involving a lobe, as does lobar or croupous pneumonia. Hence, these points are to be taken into consideration in the differential diagnosis of these two affections. But its course may be passive, as the result of hypostatic or passive congestions, and in that case it is usually a secondary disease, just as interstitial nephritis would follow passive congestion of the kidney, or interstitial hepatitis that of the liver, both possibly resulting from obstructive heart disease. You are all familiar with the pathology and diagnosis of the chronic catarrhal pneumonia of the apices in adults; the disease we are now studying is the same, only it is of an acute character.

We have, then, to deal with, in these cases, a general bronchitis, which affects the minute bronchioles, extending in a certain area, to the lining of the vesicles, which may be limited to one spot or may be found in both lungs; it may occupy a few scattered lobules or it may involve the greater part of or even a whole lobe. The inflammation extends to the intervesicular connective tissues, which rapidly reproduces itself, and becomes noticeable by giving rise to impairment of percussion resonance; vesicles collapse and increase the density of the mass, or they become choked with epithelial cells and detritus, and give areas of dulness. In the first stage you of course find great dryness of the mucous membrane and the accompanying physical signs; in the second stage, when the re-establishment of secretion has taken place, you will have râles of all descriptions, with the finest or the subcrepitant, over the areas of the disease. So profuse may this secretion become, and with such rapidity may it be produced, that a feeble child, unless aided by the most powerful expectorants and supported by the most stimulating treatment, may fairly drown in the accumulation within its lungs.

Probably not the least interesting part of the study to-day is that of treatment. We may divide it into two parts for consideration, the one *local*, the other *constitutional*. We also must bear in mind that it is to be modified by the three stages of the disease, the first with reference to the relief of the congestion and inflammation; the second to the rapid removal of the secretions from the bronchial mucous membrane; the third, the reabsorption of the intervesicular catarrhal products and the reinflation of the collapsed vesicles.

The morbid processes which we have just studied show us that we have to deal with tissue undergoing inflammation; but this inflammation brings with it increased supply of blood and the rapid production of new tissue, which latter will have to be reabsorbed after the inflammatory process is checked. The first indication that presents itself to you is most evident. You fulfil it by counter-irritants and revulsives. We use a poultice applied to the diseased side made of flaxseed-meal with a small quantity of mustard. This should be covered with oiled silk to prevent evaporation; it should be applied as warm as the child can bear it, and should be renewed every three or four hours. At the end of two or three days, of course depending upon the conditions of the case, the poultice may be replaced by a thick layer of cotton wadding. The whole chest should be rubbed at least twice daily with a stimulating liniment. I know of none better than

℞. Ol. Succ. ʒii.
Liniment. Saponis, fʒvi.,

which we shall use in this case. Turpentine and sweet oil may be used, or turpentine and fluid cosmoline. Should, in the earlier stages, the physical signs show an extensive involvement of the lungs or much capillary bronchitis, a few dry cups can be readily applied to the back before the poultice is used. A hot foot-bath containing mustard is also valuable, and should be repeated two or three times in the twenty-four hours.

I may say here that the child should be kept in a room of uniform temperature, especially so if you have found it advisable to give frequent hot baths instead of merely foot-baths, and in addition to the temperature of the room being kept at about 70°, you should keep the air moist by the constant slacking of lime. The object of this counter-irritation is not merely to relieve the lungs of congestion by promoting secretion from the surface of the body—increasing the activity of the skin's circulation, but also by reflex irritation to contract the capillaries of the bronchial tubes. I would advise you, also, at the onset, if the bowels are torpid and the tongue furred, to give a laxative. Castor oil is to be preferred for this purpose. The next indication is to promote secretion from the bronchial membrane, and thereby to relieve the congestion from within.

You may use for this purpose an alkaline fever mixture, obtaining what relaxation you can by the introduction of a nauseant or expectorant in small quantities. Should the membrane be very dry, and the febrile action high, as a basis I would suggest the following:

℞. Syr. Ipecac, ... ♏ x.
Liq. Ammon. Acetat, . . . ʒi.
Child one year, every three hours.

You can add to this spts. etheris nitrosi or liq. potass. citratis, if you wish. Then, again, with healthy children, when the capillary bronchitis is extensive, the cough dry and croupy, and the fever great, the *wine of antimony* may, in small doses, with great advantage, take the place of the ipecac until the severity of the symptoms subsides, that is, until secretion becomes established. In adults I have seen good results follow the use of jaborandi in such cases of bronchitis. I have not found it as reliable when used for children, and, as I used it in vain to throw off the false membrane in a case of diphtheria, and believe that in that case it weakened the

circulation, I have hesitated since to use it in children's practice. I believe you will get better results by the inhalation of steam, by the internal use of alkalies, and by counter-irritation, and at the same time run no chance of adding heart-failure to the already critical condition of your case. Should your little patients have a quick, bounding pulse, with high arterial tension, a condition more common in *croupous* pneumonia than in the disease we are now studying, the introduction of tinct. aconit. rad., ¼ gtt., repeated every three or four hours, under your own supervision, may soon bring about the required relaxation. Should, on the contrary, the child seem to be overpowered by the suddenness of the attack, be weak, with feeble circulation and no power of resistance, I would advise you to use the carbonate of ammon. (gr. 1 three or four times daily), and if necessary, use stimulants, as port wine or brandy, with it.

Catarrhal pneumonia is not of the high grade of inflammation so characteristic of the croupous or lobar variety. It is usually found in cachectic infants, in those that are rickety, or have phthisical parentage, or in the strumous, and therefore you will find it but seldom necessary to use depleting or debilitating treatment, but rather the stimulating and supporting measures from the start. It will be necessary to allay nervous irritability, and I know of nothing better for this purpose than potass. bromide, which, given in gr. ij. doses to a child of a year, has a quieting effect. You can administer it, or the ammon. bromide, at night.

To obviate the tendency to debility, you will be obliged to use quinia from the commencement—not given to the child for high temperature, but as a tonic in small and repeated doses. As you wish to keep the stomach in a condition to receive and digest milk—the only food for a child of this age—you should give the drug by suppository, using the *bisulphate* in doses of half a grain twice daily.

Bear in mind the increasing importance of food to sustain the strength of your little patient; if the child is not nursing, or refuses to nurse, you should see that at short intervals, perhaps every hour, sufficient milk, to which has been added barley-water, is given, to amount in the aggregate at the end of the twenty-four to the full complement of the child's meals when in good health. Albumen-water, whey, veal, chicken broth, or beef-juice, can be occasionally substituted, or, in fact, used instead, should the milk disagree.

I wish by no means to restrict you to the plan of medication I have thus sketched out; there are many other suggestions I could make, would time permit. The ammon. muriate, in the earlier stages, would usually be of great value as an expectorant; and you might find such indications as low vitality, or evident blood changes, that would necessitate the use of potass. chlorat.

Let us now anticipate the result in the case before us, and study for a while the treatment pertaining to the stage of convalescence. In a few days, a week at the most, free secretion will set in, the cough will become looser, the child's skin will become moist, and the febrile symptoms, instead of being constant, will develop a hectic character, with nightly exacerbations, gradually diminishing until the normal temperature is permanently maintained. The proliferated cells, and their débris, that are more or less within the vesicles, will be soon either absorbed or expectorated; these, with mucus, will be coughed up in quantity and swallowed by the child, and the mucus appear in the passages.

Frequently we find that at this time an excess of secretion takes place, and the child will be totally unable to relieve itself of it; you will have to watch this carefully. Add some stimulating expectorant to your treatment; use carbonate of ammonium freely (one gr. every three hours for a child of a year), and if you find upon auscultation that the râles are becoming more numerous, and the child shows signs of suffocation, give at once full emetic doses of ipecac or alum, and use the external applications of hot- and cold-water douches to the chest, alternately, to stimulate the respiratory function. I have frequently seen children saved from this threatened danger by using the most active treatment; and I remember a case of a young babe that occurred in this house some years ago, when life was saved after the child had become unconscious from asphyxia, due to profuse secretion from capillary bronchitis, by the alternate immersion into hot and cold baths, and free use of alum and brandy. Minute doses of atropia, or of belladonna, might be used with advantage to stimulate the respiratory centre.

The new intervesicular tissue will still remain for a while, firm and easily demonstrable by the physical signs. To its absorption you will have to direct your attention. You will now find it necessary to keep up a certain amount of counter-irritation, no longer by means of poultices and stimulating liniments, but by *iodine*, painting the surface over with a diluted tincture; not often enough to make the skin tender. Your main reliance will be placed in the following drugs: cod-liver oil, iron, quinia, and iodide of potassium. Let me call your attention to these *seriatim*.

There are many ways of administering cod-liver oil. You can have an emulsion made containing 50 per cent. of the oil. The following formula which I use is an excellent one:

℞. Ol. Morrhuæ, ... f℥iii.
Glycerinæ, ... f℥ss.
Pulv. Acac, ... ℥iij.
Aq. Cinnamomi, . . . f℥ijss.

This contains much less gum than is usually used, and requires more time and trouble in preparing, but I believe it agrees better, as it is more fluid, and has less tendency to constipate. The emulsion is certainly more palatable to children than the pure oil, and I think it is easier of digestion. I have used hydroleine of late in this hospital, a box having been sent me by Kidder & Co., of New York. In some cases it did well, but I did not find it superior to the ordinary preparations. In adult practice I think it at times a good preparation. I have seen one patient who was not able to retain cod-liver oil before taking it. The "pancreatic" emulsion of Savory & Moore (London) I am sure you will find an excellent preparation for children; its only disadvantage is that it is expensive, and when you have to use it for a length of time this has to be taken into consideration. Another good emulsion made by Dudley, containing pancreatine and lacto-phosphate of lime will serve you well, and it is much cheaper than the English preparations. But, after all, gentlemen, I think it better to advise you to have your emulsions put up from prescription, making only a small quantity at the time, and keeping the preparation of it under your own supervision—you will frequently find the oil emulsion useful as a vehicle for the administration of other tonics. My experience in this hospital leads me into saying that you will find, certainly among the poor, the addition of the lacto-phosphate of lime or the compound syrup of the phosphates of the greatest advantage. I have found that children will improve many times more rapidly when either of these is added to the emulsion, than when the latter is given alone, and I have attributed it partly to the very prevalent rickety diathesis. You can also add two or three grains of lacto-peptine to each dose.

Caswell, Massey & Co., of New York, have lately made an emulsion containing ½ gr. of quiniæ sulph. to the ℥ss. and gr. ij. of pepsine, and this I highly recommend to you, when your patients can afford it, for the

cases under consideration. Some of you know that the inunction of cod-liver oil is used most successfully in this hospital, and I need not delay to impress upon you its value in young babes in all cases when the oil is indicated.

As soon as your patient's stomach is in a condition to receive it, it is well to begin with small doses of iron. I need not tell you that the syrup of the iodide is the one most generally used. You can add to it your oil emulsion, beginning with five-drop doses and gradually increasing if it is tolerated. Frequently in its stead I have used potass. iodide, making use of the emulsion as a vehicle, using from one to two grains at each dose. I have of late been using the hydro-bromate of quinia instead of the sulphate with, I think, gratifying results. You can use it with the emulsion of oil. I have used the potass. iodide with great advantage by suppository in three- to five-grain doses, in cases when the indications were urgent for its use, and I have been led to attribute the good result to its use. It is necessary also to give attention to the excretion of the child at this time. The phosphate of soda has been recommended in these cases. You will find that its liver becomes torpid, whilst giving the oil, and that the so-called *bilious* spell will require either an occasional dose of castor-oil or one preceded by a small dose of calomel. The following powder is frequently used in this house for this purpose:

℞. Hyd. Chl. Mitis, . . . gr. ⅙
Pulv. Ipecac., ... gr. ½
Gum Acac, ... ℿ

Given at night with a dose of oil three or four hours later. Bear in mind the importance of attention to the skin; have the child thoroughly sponged at least once daily during the height of the attack, and morning and evening during its convalescence; keep it in a room of regulated temperature, but the air must be fresh and pure, and the sleeping-room well aired daily.

ORIGINAL ARTICLES.

GUNSHOT WOUND OF STOMACH—RECOVERY.

BY WALTER IZARD, M.D.,
OF LIBERTY, VA.

DECEMBER 27, 1881, Edward J., a small colored boy, aged about twelve years, shot himself with a toy pistol, into which he had managed to force a pistol cartridge of the calibre known as "*22 short.*" Within fifteen minutes after the receipt of the injury he was brought to my office, when his condition was as follows:

Pulse, fifty per minute, thin and feeble; extremities cold; surface bathed in a cold perspiration; eyes closed; tongue dry and pale; frequent vomiting; vomited matter consisted of clotted blood in considerable quantity, with a little mucus. Upon examination of the body of the patient, a small wound was discovered one inch below the ensiform cartilage, and one inch to the left of the median line. A probe cautiously introduced penetrated to the depth of three inches in a direct line towards the centre of the body. Gunshot wound of the stomach was diagnosed, and an unfavorable prognosis was made. The patient was conveyed to his home, put to bed, external heat applied, and a quarter of a grain of sulphate of morphia injected hypodermically. In a few hours, evidences of reaction appeared, when alcoholic stimulants were cautiously administered in small quantities *per orem*, with apparent benefit. These were carefully continued during the night, with sufficient opium to secure quiet.

No material change occurred until the 30th, when evidences of peritonitis became manifest, at first confined to a region extending from the point of the entrance of the ball to a point in the right groin two inches below the anterior superior spine of the ilium. This region was at first not more than one inch wide, and indicated, in the opinion of the writer, the course of the ball. From this strip of inflammation the peritonitis extended on all sides; the abdomen became tumid; the countenance drawn and anxious; the dorsal decubitus was constant, with the knees drawn up; the temperature reached 104° Fahr., and the pulse 140 per minute. The treatment consisted in the exhibition of opium to the point of maintaining constantly a condition of seminarcotization, with the continuous application of hop poultices to the entire abdomen, while sufficient nutriment was supplied by means of milk punch. The bowels showed a tendency towards diarrhœa, but were controlled with opiates. On the tenth day after the receipt of the wound, a decadence of the symptoms of active inflammation was observed, from which, gradually, convalescence and ultimately complete recovery resulted, so that at the present writing the boy is going about, apparently as well as ever before.

It seems evident, from the history of the wound, and of the order of the occurrence of the subsequent symptoms, that the ball must not only have penetrated the cavity of the stomach, but also have passed out of it, thus making a wound of entrance and one of exit in that viscus: a fact which, if admitted, at least doubled the chances against the patient; not only because two wounds are harder to heal than one, but because the wound of exit being, by a well-known law, larger than the wound of entrance, offered greater facility for the escape of the contents of the stomach into the peritoneal cavity. It is also to be remarked that, doubtless, no wound of the intestines occurred, and to be commented upon as most fortunate that this was so, for if such a wound had occurred, and this wound had admitted of the escape of fecal matter, as it surely would have done, it cannot be supposed possible that so favorable a termination would have been the result. It may also not be considered unworthy of remark that death did not occur from shock, when the immediate proximity of the solar plexus of nerves is considered, and when the frequent fatality of even slight injuries in that region is recalled.

POISONING BY CREASOTE.

BY FORDYCE GRINNELL, M. D.,
PHYSICIAN TO THE PINE RIDGE INDIAN AGENCY, DAKOTA.

BABY BREWER, a boy one year old, was given by his elder sister, in the absence of the mother, a teaspoonful of creasote. I saw the child about half an hour afterwards, and noted marked depression of the heart's action, great pallor, and an anxious expression of countenance, with an occasional hoarse, croupy cough and stertorous breathing.

The child obtained its nourishment mainly by

nursing, and a tenacious material, probably the milk partially coagulated by the creasote (as there was a strong odor of the latter), was expelled occasionally from the nose and mouth in attempts at coughing.

As it was not known that vomiting had taken place, the only emetic at hand, the fluid extract of ipecac, was given, and this was followed by castor oil, with the view of enveloping the poison which might be remaining in the stomach. Free emesis was produced, the material vomited having a strong odor of creasote.

As the breathing became more labored, and the signs of collapse imminent, aromatic spirits of ammonia was given, and mustard drafts applied to the feet. The pulsation which a little before could not be detected in the radial artery, now became perceptible, and the returning warmth of the body indicated a favorable reaction.

The indications now were to combat the inflammation, which, during the night, the extreme thirst showed to be already arising. Broken pieces of ice were freely given, which the child seemed to enjoy, and frequently indicated his desire for them. The thirst gradually became less, and on the morning of the third day I found the patient sitting up in bed and eating scraped apple. No further untoward symptoms supervened, and the child was a few days since brought to my office to be vaccinated.

I have noted this case, because it appears to me to be the duty of the physician to report all such cases for the mutual benefit of the profession.

The seventeenth volume of *Ziemssen's Cyclopædia* purports to be in the main a treatise on poisons, but no mention is made of creasote and its effects, the nearest approach being what is said under the head of carbolic acid. It is true that the action of these two drugs in poisonous doses is perhaps not very dissimilar, as the symptoms exhibited in this case, and those of carbolic acid poisoning, indicate.

On page 530 of the volume referred to, Boehm says of the symptoms of carbolic acid poisoning: "The breathing is described as stertorous by most observers, or if consciousness is not entirely lost as very laborious and dyspnœal. Well-marked general convulsions, up to the date of this, have never been developed in human beings, but are scarcely ever absent in experiments on animals."

And again: "In the earlier stages of the poisoning, the pulse is generally strikingly slow, later on it is generally much quickened. The repeated filling of the mouth with foam, observed in Jeffrey's and Hainsworth's cases, may be ascribed to salivation, which has been observed in most cases of poisoning which kill by asphyxia."

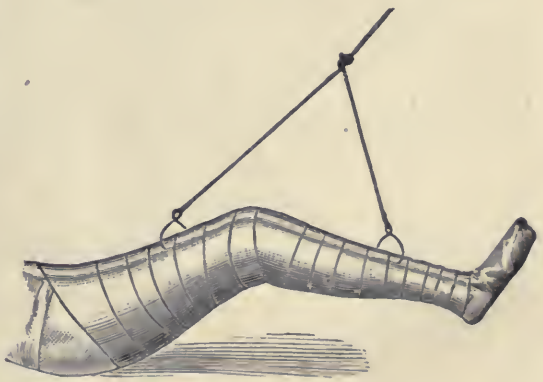
From these quotations, and a further perusal of Boehm's article, it will appear that the poisonous effects of creasote and carbolic acid have many points in common.

The filling of the mouth with foam or mucus, however, appeared to me in this case, as it accompanied acts of coughing, and presented strongly the odor of creasote, to be due to the action of the poison upon the milk. The milk ingested, perhaps, acted in part as an antidote, as the white of eggs given early after the reception of the poison might have done. Albumen would, perhaps, constitute the best antidote, of course to be followed at once by an emetic, in order to remove any of the remaining poison.

PROF. N. R. SMITH'S ANTERIOR SPLINT.

By EDW. BORCK, M.D.,
of St. Louis, Mo.

In The Medical News of January 14, 1882, appeared an article under "Hospital Notes:" "Treatment of Fracture of the Femur in the Hospitals of Philadelphia." Though there is nothing new in the methods depicted, nevertheless it is well and useful to bring them from time to time before the profession. The writer informs us that the dressing most widely employed in the hospitals of Philadelphia is one which combines the principles of extension and counter-extension with lateral support. I do not propose to criticise any method in regard to efficacy, but simply call attention to N. R. Smith's Anterior Splint, as the drawing of it given in The Medical News, *as well as in most of the text-books*, conveys an incorrect idea. It exhibits the suspending rope hanging down perpendicularly. This should not be so. The point of suspension should not be *vertically* over the leg suspended, but should be remote and so distant that a certain amount of traction may be obtained; without this factor, there can be neither extension nor counter-extension.



The cut here given will show the adjustment correctly.[1]

The same holds good for Dr. John T. Hodgen's splint. (Smith-Hodgen Wire Suspension Splint.)

In the treatment of fractures, all surgeons aim at extension and counter-extension; but let it be remembered, especially in *fractures* of the *femur*, it is *continuous* and *equable* extension we wish to secure; and, in the language of Dr. Hodgen, these factors can only be secured by suspending the limb; and I say emphatically, only by suspending the limb correctly. If the rope, when adjusted, hangs down perpendicularly, rest only is obtained; equal and continuous extension are not secured; and, without the latter, the result will not be very satisfactory with the suspension apparatus.

[1] A correct drawing can also be found in my monograph on "Fracture of the Femur," to which the reader may refer for description.

A YEAR'S WORK IN OVARIOTOMY.

BY WILLIAM GOODELL, M.D.,
PROFESSOR OF CLINICAL GYNECOLOGY IN THE UNIVERSITY OF PENNSYLVANIA.

FOLLOWING the custom of European ovariotomists, I here give the statistics of my last year's work in ovariotomy, and it is my purpose to do so every year. This paper does not, however, embody a twelve-months' work, but a ten-months' work, for, having attended the International Medical Congress, held at London, I was absent from home exactly two months of the year.

In the following cases, the letters S., M., and W. denote respectively single, married, and widow. The letters R. and L. mean the right and the left ovary, and the letter which precedes the other denotes the larger cyst. By the short incision is meant an incision between the navel and the pubes; by the long incision, one in which the incision has been prolonged to a point above the navel.

Number.	Medical Attendant.	Age.	Condition.	No. of Children.	Previous Tappings.	Place of Operation.	Date of Operation.	Adhesions.	Ovary Diseased.	Character of Tumor.	Incision.	Drainage.	Result.	Remarks.
1	Dr. Smith Fuller, Uniontown, Pa.	35	M			Home.	Jan. 22.	Omental, parietal, intestinal.	L	Large and semisolid.	Short.	None.	Death from Peritonitis.	The tumor was malignant; adhesions bad.
2	Dr. J. H. Chandler, Centreville, Del.	43	M	2	1	Private Hosp'l.	Jan. 29.	Omental.	L R	Medium polycyst.	"	"	Recovery.	
3	Dr. A. G. Coleman, Limerick Square, Pa.	44	M		2	Home.	Feb. 19.	Omental and pelvic.	R	Large polycyst.	"	"	"	Much ascitic fluid, and the womb greatly enlarged by multiple fibroids.
4	Dr. W. D. McGowan, Ligonier, Pa.	27	M	3	1	Univer'y Hosp'l.	Feb. 21.	None.	L R	Small.	"	"	"	
5	Dr. W. Sinkler, Philadelphia.	22	S			Private Hosp'l.	Mar. 2.	"	L R	"	"	"	"	Cyst of each ovary, and of left parovarium, removed, together with a fibroid body in right broad ligament.
6	Dr. L. D. Harlow, Philadelphia.	30	S		1	Home.	Mar. 9.	Omental, parietal.	L R	Large polycyst.	"	"	Death from Septicæmia.	At the time of operation was very ill from inflammation of the cyst, which was found full of pus; pulse, 140; temperature, 103°.
7	Dr. S. W. Mitchell, Philadelphia.	24	S		1	Private Hosp'l.	March 23.	Omental and pelvic.	L R	Oligocyst.	"	"	Recovery.	Right ovary enucleated from broad ligament.
8	Dr. G. S. Gerhard, Ardmore, Pa.	60	M	5		Univer'y Hosp'l.	March 29.	Omental.	L	Large monocyst.	"	"	"	
9	Dr. F. C. Sheppard, Philadelphia.	40	M	2	1	"	April 5.	Omental, parietal.	R L	Large colloid.	"	"	"	The cyst had burst previously to the operation.
10	Dr. J. R. Chandler, Centreville, Del.	40	M			Private Hosp'l.	Apr. 20.	None.	L R	Colloid.	"	"	"	
11	Dr. G. Mays, Philadelphia.	34	M		2	Home.	Apr. 21.	Universal.	R	Purulent.	Long.	Glass-Tube.	Death from Exhaustion.	A desperate case, in which pelvic abscess had occurred, matting everything together, and discharging through the bowel. For several days after operation fæces escaped through drainage-tube.
12	Drs. D. H. Agnew and W. Goodell,	42	M	2	1	"	May 10.	Intestinal.	R	Large oligocyst.	Short.	None.	Recovery.	
13	Dr. G. R. Meschter, Worcester, Pa.	49	M	9		"	May 14.	Parietal.	R L	Large polycyst.	"	"	"	
14	Dr. F. Schwartzlander, Doylestown, Pa.	32	M			Private Hosp'l.	May 17.	Parietal, intestinal.	L	Fleshy colloid.	Long.	"	"	A forlorn hope; bedridden for months, and greatly emaciated. Both tumors malignant; died on the table, while the wound was being closed.
15	Dr. A. Schæffer, Lewistown, Pa.	38	S			Home.	May 21.	Universal.	R L	Solid cheesy cyst.	"	"	Death from Shock.	

Number.	Medical Attendant.	Age.	Condition.	No. of Children.	Previous Tappings.	Place of Operation.	Date of Operation.	Adhesions.	Ovary Diseased.	Character of Tumor.	Incision.	Drainage.	Result.	Remarks.
16	Dr. T. R. Hayes, Bellefonte, Pa.	45	M	7	3	Univer'y Hosp'l.	June 2.	Omental, parietal, intestinal.	L	Solid colloid, 20lb.	Long.	None.	Recovery.	Many ligatures needed.
17	Dr. E. L. Duer, Philadelphia.	28	S			"	"	Extensive parietal.	L R	Large.	"	"	"	
18	Dr. J. Pittman, Tarboro', N. C.	50	S			Private Hosp'l.	June 7.	Covered by Brd. Lig.	L	Large uniloc.	Short.	"	"	Cyst had to be enucleated; womb gnarled by fibroids; two pedunculated fibroids removed.
19	Dr. J. Fay, Altoona, Pa.	61	M	8	1	Home.	June 18	Omental, parietal, pelvic.	R	Large.	"	"	"	
20	Dr. T. V. Crandall, Philadelphia.	62	W	2		Private Hosp'l.	Sep. 5.	None.	R L	25 lbs.	"	"	"	Womb gnarled with multiple fibroids.
21	Dr. J. Hearn, Philadelphia.	29	M	2		"	Oct. 9.	Omental.	L R	Solid fibr'd, 18 lbs.	Very Long.	"	"	
22	Dr. J. R. Haney, Camden, N. J.	50	M	3	1	Univer'y Hosp'l.	Oct. 20.	Extensive parietal.	R	65 lbs.	Short.	Glass-Tube.	"	An insane woman; very restless and uncontrollable.
23	Dr. R. W. Deaver, Germantown.	37	M	5		Home.	Oct. 22.	Parietal.	L R	Colloid.	"	None.	"	
24	Dr. E. W. Watson, Philadelphia.	50	W	7		"	Oct. 24.	Omental, parietal.	L R	20 lb. dermoid.	"	"	"	A tumor of twelve years' standing.
25	Dr. G. P. Yost, Loganville, Pa.	35	M	1	3	Univer'y Hosp'l.	Oct. 29.	Omental, pariet., pelvic, uterine.	R	30 lbs.	"	Glass-Tube.	Death from Exhaustion.	Patient very weak; a very formidable operation.
26	Dr. Lloyd, Yardleyville, Pa.	35	W	2		Home.	Nov. 5.	None.	R L	15 lbs.	"	None.	Recovery.	
27	Dr. Howard Kelley, Philadelphia.	40	S			Univer'y Hosp'l.	Nov. 7.	Omental, parietal.	R L	35 lbs.	Long.	Glass-Tube.	"	Womb enlarged by multiple fibroids; two pedunculated ones were also removed.
28	Dr. W. C. Simpson, New Brighton, Pa.	54	M	8		Home.	Nov. 12	None.	R	3 lbs. fibr'd.	Short.	None.	"	Solid fibroid of right ovary, with much ascites.
29	Dr. T. D. Dunn, Philadelphia.	36	M	2	1	Univer'y Hosp'l.	Nov. 14	"	R L	10 lbs. colloid.	"	"	"	
30	Dr. W. Goodell, Philadelphia.	27	M			"	Nov. 17	Omental, pelvic, intestinal, uterine.	L R	20 lbs.	"	Glass-Tube.	Death from Shock.	Both ovaries so implicated in tumor that it was impossible to tell the one from the other. A very difficult operation.
31	Ibid.	32	M	3		"	Nov. 25	Extensive and firm parietal.	L	45 lbs.	Long.	"	Death from Peritonitis.	Two cases of traumatic erysipelas were in the hospital at the same time.
32	Dr. B. F. Baer, Philadelphia.	20	S		1	"	Dec. 8.	None.	L R	15 lbs. colloid.	"	None.	Recov'y.	Both ovaries so adherent to womb that the bladder had to be dissected off, and the womb removed at its neck. She recovered from operation, and died on 31st day from pneumonia.
33	Dr. W. C. Dixon, Philadelphia.	36	M	2		"	Dec. 17.	Pelvic, uterine, and intestinal.	R L	20 lbs.	Short.	"	"	
34	Dr. M. H. Green, Philadelphia.	40	S			Private Hosp'l.	Dec. 31.	Intestinal.	L	15 lbs.	"	"	"	Cyst of left parovarium, with corresponding ovary flattened out in its walls.

My results do not show so well as some of the ovariotomists abroad, but this is owing to several very good reasons. In the first place my experience is not so ripe as theirs, and in no other operation in surgery does practice tell more than in this. Secondly, I have always felt that for a surgeon to decline to operate on a case of ovarian tumor, simply because it is not a promising one, is virtually the same thing as if he had operated on the case and had lost it. Acting on this principle, I have, no matter how desperate her condition, never refused to give the otherwise doomed woman her only chance for life. In this way I have been able to restore to life at least three women who had been abandoned by other surgeons, viz., cases XIV., XXI., and XXVII. But as a set off, by this rule of conduct I am compelled to report in my table three fatal cases, viz., Nos. VI., XI., and XV., which would otherwise not have appeared there.

Then, again, I have made it a rule always to try to remove a benign ovarian cyst, however adherent it may be, and always to complete the operation when once begun, however unpromising the result may seem. Hence, I have not an incompleted operation to report, since the operation once begun was always ended by the removal of the cyst. Nor have I, during the past year, in a single instance of ovarian tumor, for any cause whatever, abandoned the case after making an exploratory incision.

In the fourth place, I labor under the disadvantage, not only of having performed many of these operations in a general hospital, viz., that of the University of Pennsylvania, but also at the home of my patients, who lived at such a distance that I either could not see the woman again, or else was not able to pay her that close attention which her subsequent treatment demanded. I had also repeatedly to perform the operation in the country, with assistants who had either never aided at such an operation, or, indeed, had never even seen it. All these facts must be taken into consideration before a just comparison can be made between my results and those of more highly-favored operators.

The following analysis of my last year's cases will, I think, tend to verify some of these statements. For instance, I had twelve patients operated upon at their homes, with four deaths; thirteen in the general hospital of the University of Pennsylvania, with three deaths; and nine in my private hospital without a fatal result. Now, my private hospital is situated on high ground, and a patient there receives my undivided attention, because the building is so near my house that I can see her many times a day. Besides that, she has a skilled nurse to wait upon her, one who is experienced in the after-treatment of such cases. At the Hospital of the University the air is, of course, not so pure, and the patient receives but one visit a day from me. Again, her nurse is liable to be a general one and not a special one. Patients operated on at home are the worst off, because they often not only did not have a skilled nurse, but could not receive the close attention which is demanded after such an operation. For instance, out of the twelve patients operated on at home, six of them were not again seen by me, and two of them died. The other six were seen by me more or less frequently, and two of them resulted fatally. Still, statistics are notoriously misleading, and I am bound to own that some of these cases would have ended fatally whether operated on at home or elsewhere.

In the foregoing cases ether was the anæsthetic invariably given. I prefer ether, *ether fortior*, because it is the safest of all anæsthetics, and especially so when administered, as it often had to be in my distant cases, by a physician unaccustomed to its use, or by one who is very likely to forget the patient in his eagerness to watch the steps of a novel operation. Then, again, ether is not so liable as the other anæsthetics to be followed by stubborn vomiting.

All of these cases were operated upon under the spray, and every detail of Listerism was carried out, with the single exception that, in the place of the protective, the gauze and the mackintosh, the wound was dressed simply with salicylated cotton, covered by a roll of ordinary cotton-wool. I am very partial to this dressing. It is dry and antiseptic, and under it the longest wounds will heal by first intention, without the formation of any pus whatever. I do not remove the first dressing before the ninth day, and thus far I have at that time invariably found the wound wholly free from any smell. So long as I get such good results from Listerism, I shall not give it up, even in private practice. Nor do I see how it can very well be dispensed with in the foul air of a general hospital. Contrary to the experience of some excellent operators, I have not found that the spray causes such a rise in the temperature as to need the ice-cap. Of course, I have had to resort to its use, and on one occasion, in case V., I spent half the night in fighting a very high temperature by using two ice-caps: the one on the head and the other on the pit of the stomach. By daylight the temperature had fallen from 103.5° to 100.5°, and she eventually did well. My experience would lead me to say that the oftener I operate, the fewer cases of high temperature do I meet with. In my last eleven cases of ovariotomy, all of which were successful, I had to use the ice-cap in but two of them.

This question brings up another: that of the use of drainage. It will be seen that it was employed in six cases, four of which died. Of these fatal cases, three were operated on in a general hospital, viz., the Hospital of the University. Following Keith and Bantock, it has hitherto been my habit to use the glass drainage-tube whenever the oozing of blood cannot be stopped, and whenever a serous exhalation collects in Douglass's pouch. But, inasmuch as it interferes very materially with strict Listerism, I am disposed to look upon it with disfavor, especially in hospital practice. True, the three hospital cases in which it was employed were very bad ones. In two of them the womb was involved in the adhesions, and the women died from exhaustion, but the third one ought to have got well.

A few words with regard to some of my fatal cases may not come amiss, as they will show that in some of them the untoward result could not have been avoided. Case I. was one of nearly solid tumor, with many adhesions. The tumor looked so

suspicious that I brought home a fragment of it. This Dr. Formad examined, and pronounced it malignant. The operation was performed at the lady's home, three hundred miles away, and I did not see her again. She also lived four miles away from her physician. Her death was due to peritonitis.

Case VI. was one of suppurating cyst, in which the operation was forced upon me by the condition of the patient. At the time of the operation she had septicæmia. Her pulse ranged from 130 to 140, and her temperature from 102° to 103.5°. Altogether it was not a promising case.

Case XI. was a most desperate case. Dr. Mays, the attending physician, will, I am sure, agree with me, that it was, indeed, a very forlorn hope. A pelvic abscess had formed around the lower portion of the cyst, matting everything together, and had discharged into the rectum and vagina. The woman also had septic fever and a very high temperature, and was rapidly failing. Yielding to her urgent solicitations and to those of her husband, I allowed myself to be overpersuaded into operating. The adhesions were of the most formidable character, being pelvic, visceral, uterine, and omental. The hæmorrhage was alarming, needing many ligatures and the local use of hot water. During the separation of the cyst-wall from its pelvic attachments, the abscess was opened. This accident was announced by an audible whiff of very offensive gas, and by the entrance into the abdominal cavity of a quantity of stinking pus. Very careful cleansing was made, and a large drainage-tube was put in. For two days she lay pulseless and in a collapsed condition, her death being hourly expected. The drainage-tube meantime gave exit to broken-down blood and fœtid pus. On the third day, liquid fecal matter escaped in large quantities through the tube. This gave great relief, and her pulse now returned; but she never rallied from the shock, and on the seventh day died, her temperature never having reached 100°. The removal of this cyst was an error of judgment. With my present experience I would not have attempted it, but would simply have emptied the cyst, broken up all the child cysts, and stitched the opening to the abdominal incision.

Case XV. was another desperate case, operated on simply from a sheer sense of duty. The lady had been reduced almost to a skeleton by excessive pain and long-continued vomiting, and had been bedridden for three months. She also had a rectal stricture, which induced obstinate constipation. Her physician, Dr. A. Shaeffer, of Lewiston, Pa., will bear me out in the statement that it was a most unpromising case. Both ovaries were involved, and both had very bad adhesions, yet I have seen worse with uninterrupted recovery. The loss of blood was not great, but she suddenly died on the table just as the last stitches were being put in the abdominal wound.

Cases XXV. and XXX. were those in which the adhesions were universal and the operation very formidable. In each, more or less wounding of the womb took place. In the latter, both ovaries had so coalesced into one adherent mass that it was not possible to tell the one from the other.

Case XXXI. died, as I think, from hospitalism. The tumor was a large one, and the abdominal adhesions were so firm as to need the knife, but there was no good reason why recovery should not have taken place. In the private room next to hers, and in the room directly underneath, there were, at that time unknown to me, two cases of traumatic erysipelas, and I believe the fatal issue to be fairly attributable to the use of the drainage-tube, through which septic germs were conveyed into the abdominal cavity.

Case XXXIII. needs a more extended explanation than the brief one furnished in the table. The woman was a mulatto. Both ovaries were so fused to the womb that I had to dissect off the bladder, and remove the womb at its neck. The stump was brought out of the lower angle of the abdominal wound, and kept from bleeding by the wire clamp, which was daily tightened until it had cut its way through, and dropped off. She recovered promptly without a bad symptom. For three weeks she did well, the clamp having fallen off at the end of the first week, and the abdominal wound having closed up. She was, indeed, able to sit up in bed. Being now removed from a private room to the general ward, she caught a severe cold, and died from pneumonia on the thirty-first day after the operation.

This case, and one on which I operated year before last, are the only examples of ovarian cyst which I have met with in the colored race. But both women were light mulattoes, and would, therefore, be more exposed to the diseases of the white than to those of the black race. In each case, the cyst was fused to the womb, and the operation beset with many difficulties from visceral adhesions.

While opposed to tapping, as a dangerous expedient, my statistics will show that I am often compelled to yield my better judgment to the wishes of a patient, who is hoping against hope that she may thus escape the more dreaded operation. Apart from the well-known dangers attending tapping, such as hæmorrhage, inflammation of the cyst, or of the peritoneum, and the formation of adhesions, there is another danger not so well known, and that is the tendency to increase the solidity of the tumor. Repeatedly, after a first tapping, have I found the cyst almost wholly collapsing. At a second tapping, child cysts began to appear, and at a third, the tumor had become so solid as to demand a much longer incision than would have been needed in the first instance. By the term tapping I mean aspiration, for I have long ago abandoned the use of the old-fashioned trocar.

As I have undertaken, in this paper, to tell the whole story of my year's work in ovariotomy, I cannot, honestly, withhold one humiliating case of exploratory incision. On the 30th day of last October I was called into the country to see a lady, whose physician having tapped her with a trocar, and having withdrawn a "colloid fluid," very naturally inferred that she had an ovarian cyst. She was very fat, her legs and abdominal walls were also œdematous, and she was not only bedridden, but unable to lie in any other position than that on her left

side. The abdomen was greatly distended, and I discovered fluctuation, but no other signs of cystic disease than dulness on percussion. The diagnosis was doubtful, but as she clearly could not live long in her present condition, I determined to make an exploratory incision. When she was fully etherized we turned her on her back, and I had hardly begun the operation when she came nigh losing her life from the vertical pressure of the tumor on the diaphragm. Her breathing stopped, and she became pulseless and cyanotic. We instantly turned her over on her left side, and spent several very anxious minutes in resuscitating her. After this we kept her on her side, and as she still breathed badly, I hurriedly proceeded with the operation. After cutting through about four inches of fat, which bled very freely, I came upon a small opening, through which the omentum at once pouted out. Beneath and around this aperture my finger, and the fingers of two other physicians, apparently discovered nodulous structures and fibrous bands of adhesion, and we decided the case to be malignant. I accordingly closed up the wound, but on the following day she died from heart-clot, formed during the time of suspended animation. At a *post-mortem* made by two of the physicians, no abdominal tumor was discovered, but the liver and kidneys were "much enlarged," the omentum very fat, and the abdominal cavity filled with a "colloid fluid." It was also found that I had not penetrated the peritoneal cavity by my incision. My explanation of this is that the peritoneal end of the trocar wound had not only not healed up, but had been so stretched open as to admit a portion of omentum, which acted like a cork, in keeping the abdominal fluid from escaping, when I cut down upon it.

In conclusion, it seems to me that the only just way of rating an ovariotomist's success is to have each one publish yearly statistics, giving the fullest details of every case of completed ovariotomy, of every case of ovarian cyst on which he declined to operate, of every case abandoned after an exploratory incision, and of every case in which the operation was begun but not ended. In this way it may be unexpectedly found that the most successful ovariotomist, viz., the one who, in the aggregate, saves the most lives, is, in this truest sense, the one who shows the longest death-roll.

HOSPITAL NOTES.

PHILADELPHIA HOSPITAL.

(Service of Dr. Edward L. Duer.)

A CASE OF PULMONARY PHTHISIS IN AN INFANT SIX MONTHS OF AGE.

(Reported by W. A. Edwards, M.D.)

Baby H., æt. six months and four days. Child was admitted on October 16; was then a comparatively healthy-looking baby; its passages were frequent, slimy, and greenish, which condition soon passed away under appropriate treatment; the next demand for medicine was to prevent vomiting, which was easily controlled by the alkalies, and the child was then apparently healthy.

On about the 25th of October, the mother complained of the child's cough, which was worse at night, sometimes almost threatening suffocation. It was placed on a simple expectorant mixture, which afforded relief. I was called on the night of the 31st, in great hurry, hearing that the child was suffocating; found it in the nurse's arms, gasping for breath, cyanosed, and presenting a rapid, running pulse. I introduced my finger well down into the gullet and withdrew some thick, tenacious mucus, administered an emetic of ipecacuanha with the desired effect, after which the child was easy and slept comfortably.

In the morning a careful physical examination was made, and bronchitis detected over both lungs. A jacket poultice and expectorants were ordered together with carbonate of ammonia, whiskey, and digitalis, as the child was now rather weak. Continued this treatment until death, which occurred November 4, at 2 A.M.

Post mortem: Lungs.—Left lung presenting slight bronchitic appearances.

Right Lung.—Lower lobe congested, but containing air, upper lobe containing *numbers* of tubercles, and just opposite the right scapula, posteriorly, were found three cavities, each about the size of a three-cent piece; one was a very typical cavity, the other two could better be called excavations (vacûoles of the French writers), produced by the softening of small tubercular deposits.

The glands along the bronchi in this lung were converted into a firm resistant mass, resembling a portion of lung which has been the seat of tubercular infiltration; the enlargement was much greater in those glands which were seated externally to the lungs than of those which were imbeded in the pulmonary substance. Kidneys and liver normal, but anæmic. Spleen was slightly congested. Larynx normal and containing no ulcers, neither were tubercles found in the mesenteric gland.

Heart.—Right ventricle dilated and rather thinned. Left, contracted and slightly hypertrophied, although I am inclined to attribute this condition to the action of digitalis. The left ventricle contained quite a number of organized clots, which looked as though they had been present for quite a time.

The child's mother presents a cavity in the right apex about two inches in diameter.

The points of interest in this case are:

1. *The child's age.*
2. *The peculiarity of the disease in early life.*

1. In the examination of phthisis, in 46 cases under one year of age (West on *Diseases of Children*, p. 413), tubercle only was present in the chest in 16 cases; as to the degree of deposit, it was moderate in 3 cases, and considerable in 13. M. Cless, of Stuttgart, found vomicæ in only 9 cases out of 20, and he says, usually, the younger the child the less frequently is the occurrence of vomicæ. J. Lewis Smith (*Diseases of Children*, 2d edition) reports two cases in which there were no tubercles in the lungs. Sex does not appear to have any influence in the production of the disease. The majority of cases reported by Dr. Hennis Green were females; the majority of Rillet and Barthez's cases, males.

2. The peculiarities may be classed under the following heads:

1. The latency of the thoracic symptoms.

2. The entire absence of hæmoptysis. Sir James Clark, in his work on consumption, states that he does not remember to have met with any case in which hæmoptysis was present, but we may account for this from the fact that children do not expectorate, but swallow everything which may be brought up from the pulmonary mucous membrane.

3. The comparative slightness of the cough. It was slight, short, and dry, attracting attention by its fre-

quency rather than the discomfort which it occasioned the child.

4. The mildness of the colliquative sweats which so exhaust the grown person.

5. The ill-marked character of the hectic symptoms.

6. The fact that the tubercles were not simultaneously deposited; or, in fact, were absent in the majority of the child's organs.

In a case like the above, which runs a course so extremely rapid that many of its most characteristic symptoms have not time to manifest themselves, we are exposed to considerable risk of error, for the history of our little patient goes back only to a few weeks; evidences of impaired nutrition were almost altogether wanting, and the symptoms appeared to be those of an acute malady coming on suddenly.

As will be seen by the history, fluctuations took place in the child's condition, and the casual attack of bronchitis seemed to be the exciting cause which aggravated the pulmonary symptoms sufficiently to carry off our little patient.

MEDICAL PROGRESS.

Cantharides.—M. Albert Robin has published the results of a minute examination of the urine in a singular case, which was characterized by paroxysmal attacks of stranguary. The child was suffering from spinal caries, and the cause of the attacks was variously explained by different medical men who were consulted as vesical neuralgia, as the indication of lardaceous degeneration of the kidney, or as due to compression of the spinal cord. The real cause was only discovered by observing the coincidence of the attacks with the application of a mild cantharides ointment to keep open sores on the back. The peculiarities noted in the urine were: (1) a diminution in the chlorides during the crisis, and their increase the following day; (2) an increase in the phosphates during the crisis, so considerable that there was a spontaneous deposit of phosphate of lime and of ammoniaco-magnesian phosphate; (3) before and after the paroxysm there was a remarkable increase in the amount of lime and magnesia eliminated. At the commencement of the crisis, and even before it, there was a high degree of albuminuria, progressively diminishing until the close. During the whole paroxysm the urohæmatin was increased, and indican was present in considerable quantity. The total quantity of the urine was slightly diminished, but less so than in most cases of cantharidism. The urea was considerably increased. No blood-corpuscles or tube-casts accompanied the albumen.—*Lancet*, Feb. 25, 1882.

Relation of Meteorological Conditions to the Summer Diarrhœal Diseases.—Dr. S. C. Busey, of Washington, D. C., in the *Bulletin of the Philosophical Society of Washington*, contributes an interesting study on this subject, from which we make the following extract:

An analysis of the mortality statistics of these diseases leads to the following conclusions:

1. Diarrhœal diseases are far more destructive to infants than to adults.

2. They prevail almost exclusively during the warmest months of the year.

3. They are more prevalent in the region of this country north of the north line of the Gulf States, and east of the Rocky Mountains.

The first two conclusions are universally admitted; the third is not so generally recognized. Two additional propositions are suggested:

1. These diseases occur in groups, when the cases rapidly multiply during successive days for a week or fortnight, followed by an interval during which few or no cases occur.

2. These groups correspond with waves of continuous high temperature during day and night, which spread, at shorter or longer intervals during the summer months, over the northern climatic belt of this country, lasting from three to fourteen days, and varying in intensity at different times and in different years.

The first of these propositions cannot be established, because of the absence of statistical data relating to the beginning of the initial symptoms of the diseases; the second is provon by data supplied by the Signal Service Bureau. A comparison of these data with the mortality statistics shows:

1. That the month of July is the hottest and sickliest month of the year, most conducive to bowel affections, and most fatal to children under five years of age.

2. The epidemics of bowel affections of children, incident to the summer season, have their beginning nearly simultaneously with the first exacerbation of heat, which usually occurs in the latter half of June; and the maximum daily mortalities more frequently correspond with the maximum temperatures, which occur in periods of three or more days, at longer or shorter intervals during the summer months.

3. With the usual lowering of temperature and absence of excessive heat periods, which occur after the middle of August, the daily mortality declines.

4. The detrimental influence of summer temperature is intensified by sudden and acute elevations and falls.

5. Children under one year of age are most numerously and seriously affected.

Heat exhibits its deleterious influence in another and very important relation. It is one of the many conditions which, in conjunction, make up a season. A comparison of the statistics of the weekly mortality from diarrhœal diseases in the principal cities of the country, grouped according to latitude, will exhibit the gradual increase of these diseases with the gradual advance of the summer solstice northward until it reaches its maximum, during the period when all the elements which complete the season of summer are in their fullest activity; also a gradual decline with the return of the winter season.

The total movement of the wind is, perhaps, a more important influence than is generally believed. A comparison of the mortality data with the records of the monthly measurement of the wind, supplied by the Signal Service Bureau for the years 1875, 1876, 1877, 1878, 1879, and 1880, shows:

1. July is the month of greatest mortality and least movement of the wind.

2. The nearer the monthly movements of the wind approach uniformity, the less the mortality for summer diarrhœas.

3. Equality of climate corresponds with uniformity of and moderate or small movements of wind, and small mortalities.

4. Wide ranges of temperature correspond with large movements of wind, and high mortalities from diarrhœal diseases.

5. Weekly mortalities from diarrhœal disease increase correspondingly with advance of the summer solstice northward, increasing and greater range of temperature, and larger and more fluctuating movements of wind.

Relative saturation of the air bears no constant relation to mortalities. Moisture in relative excess to the heat of an impure and stagnant atmosphere is the condition which supplies the most satisfactory explanation of its detrimental influence.

Hæmatic Crises.—Under the name of "hæmatic crises" M. Hayem has described the alteration in the

constitution of the blood which attends the critical periods of those acute diseases that are marked by sudden defervescence. This alteration in the blood occurs so constantly, and with such well-marked features, that it merits the name of "crisis" as thoroughly as does the alteration in temperature. The essential characteristic of the hæmatic crisis is the transient accumulation of hæmatoblasts in the blood. Normally the proportion is one hæmatoblast to twenty red corpuscles, and when the conditions of blood-formation are normal this proportion is nearly constant. During the course of acute diseases the number of hæmatoblasts is decreased, and then suddenly at a certain period undergoes a rapid increase, while that of the red corpuscles remains nearly the same. In forty-eight hours the number of hæmatoblasts is double. Twenty-four hours later, however, it presents a notable fall, and gradually sinks to its original figure. If the changes are represented in a graphic diagram, the variation in the number of hæmatoblasts takes the form of a cone with a very sharp apex. This hæmatic crisis is never wanting in these diseases, and is quite comparable to that which is indicated by the temperature. It commences towards the end of the malady, usually at the moment when the temperature begins to fall, and attains its height on the day on which the temperature is for the first time normal, when defervescence is complete. In the eruptive fevers, such as scarlatina and measles, in which a febrile temperature may continue after the defervescence which follows the eruption, the hæmatic crisis attains its acme at the end of the partial defervescence which follows the eruption. Whatever the original number of the hæmatoblasts and of the red corpuscles, the abnormal proportion attained at the period of the greatest accumulation of the latter is always the same. The average is one to seven, and it only varies between narrow limits —from one to six to one to eight. The red corpuscles are at a minimum at the period of the commencement of the hæmatic crisis, when the hæmatoblasts begin to accumulate in the blood. They increase in number during the course of the crisis, especially in proportion to the return of the hæmatoblasts to the normal number. The new corpuscles, however, contain less hæmoglobin than do the adult corpuscles. Hence the value of the corpuscle (*i. e.*, its average richness in hæmoglobin), which was unchanged during the course of the disease, lessens considerably during the new formation of the elements of the blood, the fresh elements remaining for a time imperfectly developed. The blood thus presents the characters of a slight degree of anæmia, and so remains during the whole of the convalescence. The hæmatic crisis is the indication of the attempt at reparation of the blood which occurs at the end of acute diseases. During the course of these affections, the process of blood formation is hindered, but when the morbid cycle arrives at its close, there is the sudden attempt at reparation, commencing by a great increase of new red globules—*i. e.*, hæmatoblasts—and soon these imperfectly developed elements are transformed into red corpuscles, which only very slowly acquire their due proportion of hæmoglobin. The phenomena are similar to those observed after considerable loss of blood, which is followed by an augmentation in the hæmatoblasts, preceding an increase in the red corpuscles.—*Lancet*, Feb. 25, 1882.

CURABILITY OF UTERINE DISPLACEMENTS. — Dr. GEHRUNG holds:

1. That cases of displacement of the first class (acute) may be cured by almost any means or method that may be tried. Even here permanent cures are not the constant termination.

2. That cases of the second class (sub-acute) are occasionally cured by surgical operations; some get well (apparently or really) by themselves, if left alone; others are benefited by pessaries as temporary supports, and therapeutical means. The resulting cure is frequently not due to the means employed.

3. That cases of the third class (chronic) are rarely ever permanently *cured* by any of the known means. Among those cases that can be relieved by operations, some will be permanently cured, by far the greatest number only temporarily. Pessaries seldom effect a lasting cure; but worn constantly at first, and interruptedly at a later period, may render the patient perfectly comfortable for lifetime, almost equal to a cure.

4. Uncomplicated ante- and retroversions are the displacements which are most easily removed. Pessaries are the principal means for their removal, sometimes cure. Surgical and other means are usually unnecessary, and rarely successful.

5. Retroflexions, if uncomplicated, are next in the scale for easy replacement. They yield best to pessaries, but, as a rule, will return soon after their removal. If complicated with tissue metamorphosis or otherwise, retroflexions are indeed very troublesome, though they can mostly be overcome by pessaries and manual assistance. On removal of the pessary the displacement rapidly returns. All other means are unreliable.

6. Anteflexions are still less amenable to curative treatment than the aforementioned displacements. Though cures are claimed in consequence of bilateral and posterior sections, by tents, and by intra-uterine stem pessaries, the flexion is not cured, only the stenosis is lessened. Vaginal pessaries offer the best success with the least risk. Highly gratifying results may mostly be obtained by their judicious use. Where weakness from atrophy or anæmia or subinvolution is the cause of the flexion, electricity, rest, posture, massage, local and general medication are the means to be relied upon. Pregnancy, *if possible*, often diminishes the subjective morbid symptoms, rarely ever cures the disease.

7. Latero-versions, true and false, are troublesome displacements. They can, however, as a rule, be conquered by appropriate pessaries. All other means are powerless.

8. True latero-flexions are happily very rare, and almost incurable. False (or pseudo) latero-flexions, *i. e.*, lateral rotation of ante- and retroflexions, are amenable to the same treatment as the primative displacement upon which they depend, but with somewhat modified ante- and retro-*version* pessaries. So-called *flexion* pessaries are a dream of the past.

9. Retroverted anteflexion (probably a congenital defect) cannot be replaced by any means except pessaries. This is, if possible, a more troublesome displacement than even pseudo latero-flexion. If the relief of the accompanying symptoms by a partial restoration to normal shape and position could be called a cure, this displacement might be considered as generally curable by pessaries, while all other means appear to be useless.

10. Prolapse of the first degree, when uncomplicated by diseases or tumors, and dependent, as it is, on relaxation of the supports *en masse*, may be relieved or cured by rest, posture, general and local medication, electricity, massage, etc. The simultaneous use of an appropriate pessary should never be omitted.

11. Procidentia or prolapse in second and third degree may be temporarily (rarely permanently) cured by operations, or permanently relieved (probably never completely cured) by pessaries.

12. Ovarian displacements can generally be reduced and retained by well-constructed pessaries, with complete relief of symptoms, provided there is no structural disease in the displaced ovary. If such disease is present, the relief will be in inverse ratio to the disease. Surgery alone promises a cure (?) by extirpation of the diseased ovary.

13. Rectocele and vesicocele must be met surgically if complicated by laceration of the perineum; if not so complicated, pessaries offer the best result.—*St. Louis Courier of Med.*, March, 1882.

The Extraction of Cataract in the Unopened Capsule.—Pagenstecher claims the following advantages for this method, as seen in an analysis of 117 cases:

1. A perfectly clear pupil is obtained.
2. Iritis, especially plastic and recurrent iritis with all its consequences, is never observed.
3. Vision once restored is not liable to subsequent deterioration by secondary opacity of the capsule, and secondary operations are not required.
4. A greater portion of perfect vision is obtained than by any other method.
5. Hæmorrhages, especially recurrent hæmorrhages, are much less frequently observed.
6. Dazzling, due partly to slight irritation of the iris, partly to diffusion by the remaining capsule, is less frequent during recovery, and never occurs at a later stage.—*Ophthalmic Review*, March, 1882.

Successful Porro's Operation in a Woman with Osteomalacia of the Pelvis.—Boyer reports the case of a patient who had been three times delivered, the last time with forceps, and who showed the characteristic modifications of the pelvis due to osteomalacia. Porro's operation was performed at the end of pregnancy. After opening the abdominal cavity, the uterus, after Müller's plan, was rolled into the wound and opened after ligation of the cervical portion. Compression of the pedicle, which was treated externally with a 2½ per cent. chloride of zinc solution, was made by Billroth's ecraseur. The case was successful for both mother and child.—*Centralb. f. d. Med. Wissen.*, Feb. 25, 1882.

Suppression of Urine after Ovariotomy.—At the meeting of the Clinical Society of London on February 10, Mr. Knowsley Thornton brought forward a case in which suppression of urine was threatened several times after ovariotomy; on each occasion packing the arms in cold wet towels relieved the symptoms, and the patient made a good recovery, and has remained in perfect health since. The following is a brief outline of the case: J. W., aged thirty-nine, married, and mother of two living children, the youngest seven years and a half old, was admitted into the Samaritan Hospital in October, 1880. *History.*—Never strong; during the last seven years has had three stillborn children and two miscarriages. Since last miscarriage has had irregular and too frequent menstruation. Abdominal tumor first noticed early in last pregnancy, September, 1879. A few weeks before admission, Dr. Pierce, of Denbigh, tapped the tumor, and removed twenty-four pints of greenish fluid. *Condition on admission.*—Looks older than her age, and has a waxy skin; kidneys act badly, and skin is dry and hard; no albuminuria. Ovariotomy performed November 4, 1880, and tumor of right ovary removed, weighing, with contents, twenty-eight pounds. Operation of average difficulty. A good deal of sponging necessary, and occupied an hour. Temperature and pulse rose rather rapidly, and on the day after the operation the urine was scanty and dark, and the kidneys were very irritable. Digitalis and citrate of potash were given, and next day the urine was free, and loaded with lithates. On the fourth day the kidney irritability returned, and the temperature and pulse rose again; sympathetic vomiting came on; and on the sixth day, the condition appearing critical, the arms were bound and packed in cold wet towels, which were kept wet with iced water. In twelve hours all bad symptoms had disappeared. The towels were allowed to dry, and in five hours the patient was as ill as ever. The towels were wetted again, and were kept applied for forty-eight hours, during which time the patient appeared quite well; and the wound was dressed for the first time, and found soundly healed, and all the sutures were removed. The towels were removed; but during the day the kidney symptoms and sickness gradually returned, and they were reapplied. Temperature and pulse remained unaffected, but the kidney symptoms at once yielded. On the eleventh day they were again removed. On the twelfth, the temperature being normal, the patient was allowed to get up A few days later she went home; and Dr. Pierce writes that she is now in better health than she has enjoyed for some years.—*Lancet*, Feb. 18, 1882.

Erosion of the Innominate Artery in Consequence of Secondary Diphtheria of a Tracheotomy Wound.—This case, occurring in a boy nine years old, eleven days after the operation of tracheotomy, differs from the cases supposed to be analogous which have been reported by H. R. Bell, J. Wood, and Körte, in that the erosion was caused by extension of the diphtheritic process and not by pressure of the cannula. In this case, reported by Gnandinger, the tube had been removed several days before and the autopsy showed a cavity lying in front of the trachea, from which the tissue-destruction extended into the thoracic cavity. The left wall of the innominate artery was here of a greenish color, and was perforated in two spots of the size of a poppy-seed.—*Centralb. f. d. Med. Wissen.*, Feb. 11, 1882.

Surgical Uses of Kangaroo Tendon.—A paper was read on this subject by Mr. Girdlestone, at the meeting of the Royal Medical and Chirurgical Society on February 14. The author stated his belief that for tying large vessels in their continuity, the long even tendons from the tail of the kangaroo were as strong as the silk ligature, caused no ulceration in the coats of the vessel, and had all the valuable qualities of catgut, without its defects. The tendons also make excellent sutures, resisting the effects of purulent discharges for a long period. A reef-knot does not slip or become loose. Where there is no suppuration the tendon coalesces with the tissues, and in suppurating wounds, though softened, they are found still to hold together at the end of eight days. The tendons were previously immersed for some weeks in carbolic oil, and entire tendons only were used. They have been employed in ovariotomy and in vesico-vaginal fistula, and held till union took place. In plastic operations—hernia and varicocele—the tissues have readily healed over them. A medium-sized tendon is so strong that it is difficult to break it with one's hands, and it is uniformly strong in its entire length of from twelve to eighteen inches. Tendons can be hardened for use as sutures by immersion in a half per cent. solution of chromic acid, after which they can be also used as drains for wounds. In their preparation they should not be removed from the tail *en masse*, but one at a time and without force, as, if split longitudinally, they cannot be relied on, and should not be used. Every diameter that is required is attainable, so that there is no occasion for splitting, neither should two or more tendons be twisted together, as it destroys their flattened form. On removal from the recently killed animal they should be cleansed in water, and afterwards in a carbolic-acid solution, and then dried, and can be so preserved, or in a five per cent. carbolic oil, as most convenient, to be again steeped in a watery solution of carbolic acid before use.—*Lancet*, Feb. 18, 1882.

THE PARASITE OF LEPROSY.—The observations of Hausen on the bacillus of leprosy, confirmed by Heiberg, Bidenap, and Winge, have recently received additional confirmation from MM. Cornil and Suchard. These investigators found that when a portion of leprous tissue was teased out in water, numerous bacilli were seen in active movement. In sections stained with methylaniline the characteristic cells of the diseased tissue, and the endothelium of the bloodvessels, were seen to contain rods and elongated spheroids. The cells of the epidermis covering the leprosy-nodules contained no parasites, which may account, the authors suppose, for the rarity with which the disease is propagated by contagion. In one case, in which the liver was found in a condition of hypertrophic cirrhosis, the bacilli were found in the newly-formed cells present in the interlobular connective tissue, and were also found in some of the hepatic cells.—*Practitioner*, March, 1882, from *Annales de Dermatologie et de Syphiligraphie*, 2d Series, vol. ii., No. 4.

TOXIC ACTION OF SALIVA.—M. GRIFFINI has undertaken to repeat the experiments of MM. Pasteur and Vulpian on the toxic action of saliva injected under the skin, and has communicated an article on the subject to the *Archivio per le Scienze Mediche*, t. v. He obtained both pure parotidean and mixed saliva, and injected both fluids beneath the skin in rabbits. He believes that pure parotidean saliva is perfectly inoffensive, that ordinary mixed saliva filtered through porous plates, so as completely to prevent the passage of microbia, does not produce any local gangrenous changes, but a general infection of the blood, resembling in all essential respects septicæmia. He has satisfied himself that it is the saliva, and not the microbia that it contains, which produces the septicæmic condition. Mixed unfiltered saliva contains much more toxic constituents, due probably to commencing putrefaction, or to fermentation in the buccal cavity; hence, when this is subcutaneously injected, gangrenous complications occur with necrosis of the tissues and ordinary septic accidents due to the resorption of gangrenous products. M. Griffini considers that his experiments prove that the toxic action of saliva is due to a non-organized ferment.—*Lancet*, Feb. 18, 1882.

AGARICUS IN THE NIGHT SWEATS OF PHTHISIS.—Mr. J. M. YOUNG classifies the results of his observations as follows:

1. Night sweating becomes proportionately lessened according to the amount of the drug administered; and, if sufficient doses be given, becomes effectually checked or prevented, according to the time of administration.

This was observed to be the absolute rule in all moderate cases of phthisical night sweating where it was tried, and in one case, where the sweating was colliquative, agaricus brought the sweating within moderate limits. In other cases of sweating not dependent on phthisis the drug was found to work well; indeed, its most notable effect was observed in the case of a patient who had had sweating of the right side of his body and right leg persistently at night for eight months, and in which a dose of ten grains stopped the symptoms for a night almost at once.

In the quickness of its action, agaricus resembles atropia. Like atropia, too, the effect is not permanent.

2. The effect of the drug against sweating is not more marked than its effect in promoting sound sleep, and relieving troublesome cough, especially of phthisis. This is the most notable fact to the patients themselves, a gradually increasing feeling of drowsiness following its administration in most cases.

The antihydrotic and soporific effects of the drug are probably distinct from one another, and not to be related as cause to effect, since, in some of the cases observed, sweating was always complained of as occurring *during* sleep, the body being covered with perspiration on awakening. Cessation of cough may, however, be the result of the soundness of sleep.

3. Strict investigation seemed to show that the drug has considerable influence in reducing the temperature, in cases of phthisis at least, where the fever is unstable, as much as two degrees of a fall having been observed within half an hour after administration of 1-12th of a grain of agaricine. Such a marked result was not always obtained by repetition of the experiment in different cases; but the fall observed in this way averaged 1.4°, and had its expression in a relieved feeling on the part of the patient.

Along with the effect on temperature, it may be noted that the rate of the pulse becomes usually reduced to a corresponding degree, but this effect has not been invariably noticed.—*Glasgow Med. Journ.*, March, 1882.

DELPHINIUM AJACIS.—Dr. BENVENUTI has recently published the results of his researches upon the virtues of *delphinium ajacis*. (*Giorn. Ital. delle mal. Ven. e della Pelle.*, Aug., 1881.) A cold acetic acid infusion of the flowers in many cases of phtheiriasis pubis was very efficient in destroying parasites and ova. In several examples of intractable ulcerating bubo, lint, soaked with the above infusion, brought about speedy cicatrization. An aqueous infusion of the dried flowers brought about similar results in instances of phagadenic ulcers, virulent wounds, and adenitis seen in prostitutes. From his experiments, the author draws the following conclusions: The flowers of the delphinium possess an insecticide action. They are to be preferred to other remedies of similar action on account of cheapness and absence of smell. They have a marked anæsthetic action, are excitant, rubefacient, astringent, and antizymotic. The author thinks this remedy has many points of resemblance to carbolic acid and iodoform.—*Practitioner*, March, 1882.

BATHS FOR THE NEWLY-BORN.—Dr. F. WINCKEL, of Dresden, (*Centralb. f. Gynäkol*, January 7, 1882), makes the novel suggestion of keeping certain newly-born children permanently in warm water. This he considers more useful than rolling them in cotton-wool, applying warm bottles, and keeping them in warm rooms. The following abnormal conditions are mentioned as being suitable for the permanent bath: 1. Children born between the 28th and 36th weeks; 2. Children born asphyxiated and weak from flooding during labor, or who have accidentally lost blood from the stump of the cord; 3. Where there is disease or fretting of the skin; 4. In emaciation, to prevent bed sores. The author has employed this treatment successfully in cases such as those above mentioned, and gives details of temperatures and results.—*Glasgow Med. Journ.*, March, 1882.

TOTAL EXTIRPATION OF THE UTERUS THROUGH THE VAGINA.—Dr. F. MARGARY reports this case, which was operated upon after the method of Billroth. Patient was affected with epithelioma of the cervix. As there was an extreme retroversion of the body of the uterus, it was first luxated posteriorly and brought into the vagina through an incision made in the utero-recto-vaginal septum. The parts were ligated laterally, and the uterus carefully dissected out, and removed entirely, complete hæmostasis being obtained by numerous ligatures. A large drainage-tube was inserted in the vagina, and Lister treatment pursued. The operation lasted nearly an hour, and the woman's condition gave hopes of a successful result.—*Gazzetta Degli Ospitali*, Feb. 26, 1882.

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SATURDAY, APRIL 1, 1882.

DRUNK OR DYING?

SUDDEN unconsciousness is the objective evidence of several different morbid states. An unknown man of the middle, or after-period of life, falls and remains unconscious in the street, and the question which the bystanders have to decide, is—has he had an attack of cerebral hæmorrhage, of alcoholic intoxication, or of opium narcosis? These questions are the more perplexing if the breath of the unconscious man smells of alcohol, or of laudanum. If of the former, he is trundled to the station-house, tumbled into a cell, and left to die or recover as the case may be. If of the latter, attempts to pour emetics into the stomach are made, apomorphia is administered subcutaneously, or the stomach-pump is introduced, it may be into the trachea, and the lungs pumped full of chalk mixture, as happened a few years ago in a London hospital. The mistakes made as to the causes and conditions of sudden unconsciousness are so disastrous, that the police and hospital physicians concerned, suffer greviously in reputation. Any physician may, indeed, be called upon to give an opinion in such a case. It may, therefore, be opportune to discuss the subject as fully as our limits will permit.

The differentiation of the several morbid states, causing sudden loss of consciousness, is by no means easy. In exceptional cases there are no symptoms which may not be possessed in common. In the absence of a correct history, in all doubtful cases, it were far better to assume the worst to be true, than to diagnosticate drunkenness and consign the unfortunate subject to a prison cell. The diagnosis of acute alcoholismus is the most common error. An attack of cerebral hæmorrhage may be precipitated by a glass of whiskey. The breath under such circumstances will have an alcoholic odor. A distinction is to be drawn between a fresh alcohol smell on the breath and the fetid odor of the drunkard's breath, due to the ethers and other products of the oxidation of alcohol in the system. The breath of an old toper has something distinctive about it which an experienced man ought to recognize. An opium odor may also be present in the breath of a man dying of cerebral hæmorrhage. For some of the prodromes, preceding an apoplectic seizure, laudanum may have been taken, and this, like alcohol, may have precipitated the rupture of a miliary aneurism in the brain. Obviously, in the absence of some specific information, it is unsafe to trust to so fallacious a test as the odor of the breath.

In perfectly typical cases, the pupils may afford exact indications, being minutely contracted in opium poisoning, dilated or unequal in hæmorrhage or concussion, and rather dilated in alcoholismus. In cases of hæmorrhage into the pons or medulla the pupils may be minutely contracted; in alcohol narcosis the pupils may be contracted or unequal, and in opium narcosis, they may be dilated or unequal. The state of the pupil may, or may not, therefore, be of any value in coming to a decision. The position of the eyes and head—the conjugate deviation—may be of great service in some cases. In cerebral hæmorrhage the eyes and head are turned towards the side on which the hæmorrhage has occurred, and from the paralyzed side. In alcohol and opium narcosis, the head takes the position given to it, and the eyes are directed forward.

The appearance of the face is not without value as a means of differentiation. In opium narcosis, the face is pale, rather sunken, and covered with a cold, clammy perspiration. In cerebral hæmorrhage and in concussion, the appearance varies; it may be pale if the hæmorrhage is large; or flushed and full and the facial veins swollen. In acute alcoholismus, the face is turgid and purplish, with venous congestion and cyanosis, the lips swollen and purple, the conjunctiva injected, and the eyelids puffy. The flapping of the cheeks, and the snoring inspiration are characteristic of cerebral hæmorrhage, and do not occur in opium or alcohol narcosis. In the latter the respiration is heavy, often noisy, and labored, and slow; in opium narcosis, the respiration is very slow, very shallow, and has a rather sighing character. The pulse characteristics correspond to the respiratory. In cerebral hæmorrhage it is apt to be slow and full, sometimes irregular; in alcohol narcosis, rather slow and small; in opium narcosis, slow and small, or very rapid and small.

The condition of the skin is very significant. In cerebral hæmorrhage the skin is rather warm; in

opium narcosis, relaxed, white, and covered with a clammy sweat; in alcohol narcosis it is usually warm and moist, and rather flushed. In all these forms of unconsciousness, if complete, the reflexes are abolished, and the muscles are in the condition of relaxation. Lying thus, an inert mass, the only signs of life are organic—respiration still continues feebly, the heart is slowly and imperfectly carrying on the circulation. Obviously, the means for exact determination of the condition causing unconsciousness are not very significant. Yet if all the points above mentioned are carefully investigated, a correct conclusion will usually be reached. The wise physician, will, however, abstain from hastily pronouncing a judgment, which may be overruled in a few hours, and will rather preserve a "masterly inactivity," and await the discovery of those facts in the history of the case necessary to the formation of a correct opinion. Meanwhile, he may employ such rational measures of treatment as the state of the case will warrant. The subcutaneous injection of atropia will be indicated if pulse and respiration are obviously failing, and the respiratory muscles may be stimulated to renewed effort by faradic excitation, and by mechanical respiration. The stomach-pump should be applied with the care necessary in all cases in which the faucial and laryngeal reflexes are in abeyance. In the absence of a suitable stomach-pump, an ordinary rubber tube may be converted into a stomach tube. Fluid at a proper elevation in a vessel connected with the stomach tube, will readily flow into the stomach, and then by depressing the end of the tube it will be converted into a siphon. At the earliest practicable moment, some urine should be drawn off, and hastily tested for alcohol, for morphia, etc. In some instances of profound insensibility from poisons, the urine has been quickly and satisfactorily tested physiologically by injecting under the skin of an animal, for example, the domestic cat.

THE STATE BOARD OF EXAMINERS OF NEW YORK.

THE need for some higher standard of medical education than the prevailing one, and the necessity for some more conclusive evidence of fitness for assuming the responsibilities of practice than is now afforded by the mere possession of a medical diploma, are strongly shown by the present movement in New York in favor of the establishment of a State Board of Examiners. The principle involved, the advantages not only to the community and to the profession, but even in the long run to disappointed candidates, of an elevation of the attainments which should alone confer a right to practice, are so obvious as barely to require statement. The community is benefited because human life is rendered safer, and is protected from the carelessness or incompetence of half-educated physicians; the profession is aided because its truly worthy members will find competition reduced, and success not so far removed or so uncertain; the rejected applicants will be profited by it because their unfitness for their chosen career is disclosed at its outset, instead of after the lapse of valuable years and the loss of irretrievable opportunities.

That these facts are strongly impressing themselves upon the minds of the profession, and that their recognition is working great good, are shown by the progressive changes in the curricula of medical schools over the whole country—the lengthening and grading of courses, the establishment of preliminary examinations, the increase of laboratory facilities, the augmented importance of clinical teaching, and many other improvements, often made by instructors at a sacrifice of time, labor, and profit, all pointing in the same direction, and testifying to the same general truth.

The laity, too, are becoming interested, as they naturally should, preventable illness and death being the gravest of all sources of national feebleness. One of the great New York dailies has recently seen fit to devote a large space to a review of the opinions of prominent physicians as to the desirability of some such legal action, upon which point it may be remarked, in passing, they were unanimous. It is safe, then, to say, that the common sense of both the profession and the public assents to the proposition, that if increased restrictions of the power to confer the legal right to practice medicine were possible without infringement of individual or corporate privileges, they would prove beneficial to every one concerned.

It is by no means so easy, however, to point out the exact methods by which these restrictions may legally and equitably be established. For many years, probably beyond those allotted to the present generation, the superabundant supply of more or less imperfectly prepared physicians will doubtless be kept up. Colleges with few advantages for clinical teaching—the corner-stone of all future medical education—and with every inducement from a pecuniary standpoint to facilitate graduation, will hold their charters and pursue their present methods, modifying them only under the irresistible pressure of public opinion. Young men, designed by nature for mechanics or merchants, for statesmen or soldiers, will persist in mistaking their vocation, and will still vainly imagine that the possession of a degree and the ability to manage disease are associated and inseparable conditions.

Neither of the above assertions as to colleges and students is to be wondered at. Human nature is much as it has always been. Voluntary and immediate sacrifice of comfort, of position, or of profit,

for the sake of principle, or even for a doubtful increase of material advantage in a remote future, will ever be of exceptional occurrence. As to the student, we need most of us but to recall our own imperfect conception of the duties and responsibilities of the profession during our college-years to comprehend and at the same time to commiserate his rashness and unfounded self-confidence.

Preliminary examinations somewhat diminish this source of evil, but their adoption rests with the colleges themselves, and cannot be forced upon them.

Under these circumstances, the remedy is naturally sought for in some power which shall be external and, in a legal sense, superior to the medical schools; and in New York it has taken the shape already alluded to, viz., the proposed establishment of a board of impartial and competent examiners, whose certificates shall afford the only legal authority to enter upon the practice of medicine. The objections, however, are numerous and weighty, and cannot all be said to have been rebutted.

Can the State, having conferred, with the power to grant diplomas, the right to practice, in equity revoke or recall that right? Can such a board as is talked of be so constituted as to pass impartially upon applicants of all the so-called "schools" of medicine? Can an examination upon the principles of medicine be considered to be sufficiently comprehensive omitting disputed points, such as questions of therapeutics? Can a sufficient number of competent men be obtained, who are not occupied in medical teaching, and who are thereby free from all suspicion of personal bias? If there are such men, is there any probability that, under our present political system, they would receive or retain the appointments?

All these questions are essentially connected with the subject, and should be carefully and critically examined into. We do not think it possible at present to answer them satisfactorily, but that the results aimed at by the bills transmitted to Albany are greatly to be desired, and that the movement is the consequence of a genuine need felt by the profession and the community at large, we earnestly believe. It is to be hoped that, in a matter which so closely affects the social and scientific standing, and the general welfare of the reputable physicians of the country, all steps will be taken cautiously, and only upon well-assured foundation of law and justice, in which event there can be small doubt that the influence of the entire profession will make itself felt in approval and support.

WOMEN AS DRUGGISTS.

At the recent commencement of the Philadelphia College of Pharmacy, we notice, with pleasure, that the Junior prize was awarded to Miss Grace Lee Babb, of Eastport, Md. We learn that there were two female students in the College during the past session. It is encouraging that fifty per cent. of their number took prizes.

Of all the many new avenues opened of late to women for an honorable, appropriate, and, it may be, a lucrative occupation, we know of none that promises better results than that of pharmacy, and our only surprise is that they have not taken it up long ago and in large numbers. Accuracy, neatness, cleanliness, politeness, these are all the requisites besides a knowledge of pharmacy. This last surely no one will claim is beyond the ability of the average woman, while the former are perhaps more peculiarly womanly virtues.

Moreover, the experiment has been tried, and tried with success. For a number of years the prescriptions at St. Mary's Hospital, we learn, were made up by the junior resident, but for some years past they have been in the entire charge of one of the sisters of the hospital. The order that came out of chaos, the cleanliness out of uncleanliness, the neatness out of disorder, were simply marvellous, while so far as the prescriptions are concerned, they are better compounded than before, and the expense from waste and mistakes, and carelessness and ignorance, is greatly lessened.

Whether women will ever be able to establish and conduct a large drug-store as a business venture, we do not know, nor do we care to discuss it. It is especially as ordinary retail druggists and as prescription clerks that we think their services would not only be useful, but welcome. We are glad to see the liberal spirit of the College of Pharmacy in opening its doors to them, and we hope that these two students are but the forerunners of many others. The Woman's Medical College could establish such a Department of Pharmacy, with but little expense, and it is well worth their while to consider the expediency of doing so. Their Professors of Chemistry and of Materia Medica are already provided, together with an excellent chemical laboratory. A Professor of Pharmacy and a pharmaceutical laboratory would be the only additional facilities necessary. We believe that such a department would be self-supporting almost from the very start, and would be soon an important source of income, to say nothing of its chief purpose as a school for women druggists.

SEWER-AIR AND ITS REMEDY.

If the belief in the potency of sewer-air as a carrier of disease-germs is not clearly established by direct and positive proof, there is no disposition nor reason to renounce it, nor dare we do so with safety, without more convincing proof of its fallacy than has hitherto been presented. It seems reasonable to suppose that the effluvia arising from sewage, which

contains more or less of the material favorable to the development (under suitable conditions frequently present in sewers) of the morbific elements of certain zymotic diseases, are capable of producing these diseases when, under favorable circumstances, they are brought in contact with the human body. We do not know positively the manner in which sewer-air becomes impregnated with these minute particles of living matter, or germs; whether by the ordinary agitation of the sewage, by means of organic dust detached from the occasionally dry walls of the sewers, or by the ascentional power of the watery vapor, or by the bursting on the surface of the liquid of bubbles of decomposition, is still a matter of conjecture. Nevertheless, with the mass of circumstantial evidence in our possession, there is not much room for doubting the presence of zymotic matter in the air of sewers, and the possibility of its transportation by means of gentle currents.

Excluding the special agency of sewer-air in transmitting the specific germs of disease, there still remains the indisputable fact that it is a hurtful mixture, which cannot be breathed in confined apartments without serious detriment to the general health. Hence the necessity, irrespective of this or that view of the *modus operandi* of causing disease, of securely and permanently excluding sewer-air from our houses. This is mainly to be accomplished by interposing a barrier, in the form of a serviceable trap or by means of an air-disconnection, between the drains of the house and the common sewer, and by thorough and constant ventilation of the entire system of house-pipes.

In adopting these essential requirements of modern house-drainage, we must not lose sight of the fact that it is equally important that the sewers shall be constructed and managed in such a manner as to prevent them, as far as possible, from becoming a source of noxious exhalations. As contributing to this object, it is essential that there shall be a prompt and rapid discharge of the sewage, and a free circulation of fresh air throughout the entire length of the conduits. The sewers should be constructed of the best materials, and in the best manner; they should be water-tight, and not larger than the actual necessities require; their interior surface should be perfectly smooth, so as to facilitate the flow of sewage, and prevent the deposit of sediment; and their shape and size should be such as is best adapted to the character of the flow, and as will permit of efficient flushing. Ventilation is best secured by properly made, free, and direct openings in the street, a plan which is recommended for its simplicity, and which, by the test of experience, has proved to be the one most entirely reliable and satisfactory.

By the rigid application of these principles in the construction and management of house-drains and common sewers, the air in these conduits will, in a great measure, be robbed of its noxious properties, and the protection of the inmates of houses, thus guarded, be rendered almost complete.

STATISTICAL RESULTS OF THE OPERATION FOR EMPYEMA.

IN the tables furnished by Dr. Moutard-Martin of his operations for empyema, we find some points of interest if not really new. The most favorable condition for the success of thoracentesis, is that form of empyema consecutive to subacute pleurisy—for of 9 cases of this kind, all were cured. Second, in respect of success, are those examples of purulent pleurisy, produced by the penetration of hydatid cysts into the thoracic cavity: of 8 cases of this variety of empyema operated on, 7 were cured and 1 died. Purulent pleurisy consecutive to the serous form presents less favorable results, for of 42 cases, 30 recovered and 12 died. This is, also, the most usual form of disease requiring the operation of thoracentesis.

All the cases of tubercular origin, whether of tubercular pleuritis, or of secondary pleurisy excited by a pleuro-bronchial fistula, or by perforation of a cavity, proved fatal. It may be desirable to state, for the purpose of comparison of forms, that there were 7 cases of empyema tubercular in origin. The cases due to pleuro-bronchial fistula without tubercle, were much more favorable—for of 19 cases, there were 12 recoveries and 7 deaths. There is little doubt, we think, that these experiences correspond closely to those which obtain in this country.

DR. JOHN S. BILLINGS has an excellent article in the January number of the *International Review* on the late International Medical Congress held in London. He reviews briefly the chief topics of discussion, including the germ theory, vivisection, Pasteur's researches, medical education, etc. After all the chief value of such assemblies, as he well points out, is in the personal acquaintances and conversations to which it gives rise; "for," as Sir James Paget aptly puts it, "in the mart of knowledge he that receives gains, and he that gives retains, and none suffer loss." With equal aptness, and a like happy diction, Dr. Billings concludes his paper thus: "Although the great Congress is gone it is not like a flame blown out, but like a handful of seeds scattered."

A BANQUET, presided over by Dumas, was recently given to Chevreul, the venerable chemist, on his ninety-sixth birthday. The Café Riche, at which the banquet was given, was elaborately decorated with flowers, in honor of Chevreul's skill as a horticulturist, and to typify his valuable work in the art

of tinting artificial flowers—an art which owes its remarkable development to his chemical researches. Chevreul has long been celebrated for his discoveries in the chemistry of fats. It is an interesting fact that this remarkable man is still engaged in lecturing on chemistry and in conducting original investigations, although he has now entered on his ninety-seventh year.

SPECIAL ARTICLE.

DISINFECTION.

I.

Aerial.

Disinfection is concerned with two objects, chiefly: with the removal of offensive effluvia; with the destruction of morbific germs; and these objects are nearly related. The removal of foul odors involves the treatment of the organic matters producing them, and the destruction of germs includes the disinfection of the solids, liquids, or gases in which they are contained, or with which they are associated. The relation of foul odors to disease production is rather æsthetical than consequential and causative. Nevertheless, the frequent, especially the constant, inhalation of the gases of putrefaction—the compounds of sulphur and phosphorus with hydrogen, the volatile fat acids, etc.—does slowly impair the vital forces, inducing a form of anæmia and chronic gastro-intestinal disorders. An obvious distinction between causes that impair the general health and disease-germs must be kept in view. Thus, sewer-gas, the product of the putrefaction of animal and vegetable matter, may slowly impair the quality of the blood; but if it be the medium for the conveyance of scarlet fever, diphtheria, or typhoid germs, these forms of disease respectively are engendered by the inhalation. When the declaration is made that some specific malady has been produced by sewer-gas, the writer confounds this distinction and attributes to sewer-gas results due to the accidental presence of some specific germ.

Into the sewers or other receptacles of human excreta and of decomposing animal and vegetable matter, the discharges from typhoid, scarlet, diphtheria, and other specific diseases, are conveyed, and with the gases produced by the putrefactive decomposition, are carried up the germs of these diseases. Around the persons of infected subjects, the air may be full of specific germs. Morbific materials, dried and pulverized, are distributed by the air in all directions. Thus the various disease-producing germs, whether unorganized ferments or minute organisms, may reach and infect susceptible individuals. We are warned against foul odors, because they are repugnant to one of our senses, but they may give notice of the approach of a more serious danger. The air we breathe may contain morbific principles, whose presence is unannounced, and known only by the effects which will follow.

Disinfection must be aerial, as well as against fluids and solids which emit foul odors, and which contain the germs of diseases.

Aerial disinfection includes the treatment of the air of the sick-room, of the house, and of sewer or cesspool connections. The agent diffused in the air of the sick-room must be effective and at the same time without injurious effect on the invalid. As a rule, the pastiles burned merely substitute a more agreeable smell; but an exception to this must be admitted in *benzoin*, as *benzoic acid* is an antiseptic of some value. The *vapor of iodine* is efficient, and easily employed. Some tincture or crystals of iodine, placed in a saucer on the mantel or table, is vaporized slowly. The compounds of sulphur and phosphorus, with hydrogen, are decomposed; watery vapor is also decomposed, hydric iodide formed, and oxygen, as active oxygen or ozone, set free. The bleaching effects of the vapor of iodine have been attributed to the active oxygen. Hydric iodide (hydriodic acid) is, also, a powerful reducing agent. Iodine may combine directly with organic substances, forming a compound of great permanence, and strongly resisting change. These facts indicate its value as an aerial disinfectant. It may also be used to disinfect the excreta of the sick, some tincture of iodine being added to the evacuations as soon as passed. It is, however, too expensive a disinfectant to be employed generally—for any other purpose, indeed, than as an aerial purifier, limited to the sick-room.

Chlorine acts like iodine. It is an active and powerful oxidizing agent in the presence of water, setting free oxygen as active oxygen or ozone, and combining with hydrogen. The offensive effluvia, composed largely of the compounds of sulphur and phosphorus with hydrogen are similarly decomposed, the hydrogen seized by the chlorine, and the associated agent set free. Chlorine is much more powerful than iodine, and cannot be liberated in the apartments of the sick, freely, without injury. It should be generally known that chlorine gas is apt to light up pneumonia when inhaled too abundantly. There are facts indicating that an amount of the gas, not sufficient to cause much distress of breathing, will excite an inflammation of the lungs in some subjects. It should also be known that as a bleaching agent, for which, as all the world knows, chlorine is much employed in the arts, it affects injuriously fabrics of wool and silk. Chlorine is an effective deoderizer and disinfectant, and not only offensive odors, but minute organisms are destroyed by it. It is esperially useful as an aerial disinfectant, but in the sick-room must be cautiously used. Four ounces of chloride of lime (hypochlorite) may be dissolved in a gallon of water, and cloths, flannel preferably, hung up in the apartment. In this preparation the chlorine is very loosely combined, and is displaced by the carbonic anhydride (carbonic acid) of the air, and so slowly that the air of the apartment does not contain at any time an injurious quantity. The powder may be at once added to any of the excreta—a tablespoonful to an ordinary stool or urinary evacuation. When a large quantity of chlorine gas is used to disinfect an unoccupied apartment, all woollen or silk materials and metals should be removed, the windows and doors closed, and several pounds of "chloride of lime," acted on by an acid, the gas allowed to con-

tinue in action for twenty-four hours. Another method for procuring the gas in quantity, is by the action of hydrochloric acid on peroxide of manganese, aided by heat. Over a quantity, say two pounds of peroxide of manganese, on a plate, may be poured eight ounces of hydrochloric acid, and the mixture placed on a hot brick.

A safer, cheaper, and probably a more efficient disinfectant, is *sulphurous acid gas*. Although entirely irrespirable in a pure state, it has been inhaled without injury diluted to a degree in which it is still irritating to the breathing organs. It is very destructive of disease-germs and of minute organisms, and it decomposes the gaseous products of vegetable and animal decomposition. One part in 10,000 parts of air destroys plant-life. Owing to its strong affinity for oxygen, it is a powerful reducing agent. In this property, we find the source of much of the disinfectant and deodorizing power. Sulphurous anhydride is readily procured by burning sulphur. The quantity liberated in any apartment may be regulated by the sensations of discomfort—the metallic taste, the constriction of the fauces, the headache, etc. The destruction of germs can be insured only by filling the apartment, or house, with the gas, the windows and doors closed. It is useful, in the event of a contagious disease appearing in a house, to generate such a quantity in the sick-room as can be inhaled by the patient without risk, and sufficient to completely fill the halls and other apartments for a half-hour at a time, daily. A pan of live coals and some sublimed sulphur are the only materials required. The clothing, bedding, and utensils may be effectively disinfected by arranging them suitably in a closed apartment, and keeping it filled with the gas for several days. It should be remembered, of course, that sulphurous anhydride bleaches by the formation of colorless sulphites.

Carbolic acid, alone, or in combination with iodine tincture, is employed as an aerial disinfectant. The acid (common will do) may be diffused through the air of the sick-room by gently warming it in a suitable vessel, or strips of cloth moistened with it may be hung up at various points. A neat way to diffuse it through the atmosphere of the sick-room, is by means of the atomizer, a one-per-cent. solution being pulverized. The acid and tincture of iodine mixed, may be treated by these methods. Aerial disinfection by carbolic acid has a questionable value. It is little more than the substitution of one bad odor for another. In the strength in which only it is tolerable, doubts may be well felt as to its power to impair the vitality of germs or ferments.

As *active oxygen or ozone* is produced in the course of the reactions with chlorine and iodine, the disinfectant and deodorizing powers of these agents have been referred to this peculiar substance. Ozone may be readily generated for the purification of the sick-room. A stick of freshly-scraped phosphorus is placed in a glass jar containing some water, but not enough to cover the stick. In the process of the oxidization of phosphorus, ozone is liberated in considerable quantity. Such a preparation placed in a secure position, and freely exposed to the air of the apartment, will accomplish the object efficiently, and with the minimum of distress to the patient. The recent researches of Binz on the physiological actions of ozone have disclosed some interesting and important results, not, however, connected with its disinfectant property, but they warrant the assertion, that in the quantity inhaled by the patient no deleterious effects will be produced. If this agent performs the part now assigned it in the bleaching effects of chlorine and iodine, it must be a valuable aerial disinfectant for the sick-room.

REVIEWS.

Percussion Outlines. By E. G. Cutler, M.D., and G. M. Garland, M.D., pp. 65, and 9 plates. Boston: Houghton, Mifflin & Co., 1882.

This book, in the words of the preface, is intended to teach students the anatomical position of the thoracic and abdominal viscera in the living subject, and to portray such boundaries of those organs as are accessible to percussion. Chapter I. discusses method in percussion, and gives excellent practical rules for the position of the patient, and for the operation, and defines the boundaries of the regions. The rest of the text is occupied with the regional anatomy and the physical diagnosis of the thorax and abdomen. The plates are outlines of the organs, and of percussion boundaries, copied from Weil. The authors, indeed, say that this manual is a condensed abstract of the German literature on this subject, which they have verified for themselves. It is an excellent manual, and one that we can honestly commend to instructors and students. Typographically it is well executed, as is the habit of the Riverside press.

A Treatise on Food and Dietetics, Physiologically and Therapeutically Considered. By F. W. Pavy, M.D., F.R.S., F.R.C.P., Physician to Guy's Hospital, etc. *Second Edition*. 8vo, pp. 402. New York: William Wood & Co., 1881.

The first edition of this excellent work, the author informs us, was exhausted in less than a year. The American edition now before us is the second. The work is a comprehensive one, and every subject is handled with the characteristic thoroughness and fidelity of the author. After an introductory chapter on Force—on the dynamic relations of food—he discusses the origination of food. Then follow chapters on alimentary principles, their classification, relations, chemical and physiological, and uses in the economy. Pavy maintains the postulate that the human machine simply utilizes the force furnished it, as does any machine, and is itself not consumed, except in the ordinary process of wear and tear. He holds that nitrogenous matter supplies "the essential basis of structure," and the non-nitrogenous—the hydrocarbons (fats), and the carbohydrates (starch, sugar, etc.)—supply the materials of force production. For a long time, the theory of Liebig, that the various activities of the body—nervous, muscular, glandular, etc.—were resultants of the oxidation of the tissues themselves, was universally held. Very recently, indeed, Flint, Jr., maintained that his study of the excretions of Weston, the pedestrian, supported the view of Liebig, but Pavy gives the opposite interpretation to the same state of facts. Since the conclusive demonstrations of Traube, but few physiologists have adhered to the theory of Liebig, and the present state of scientific opinion is all but unanimous in favor of that view which is maintained in this work.

Although the nitrogenous foods are devoted to the development and to the repair of the tissues, they may by oxidation furnish force, but in doing so they are split up into urea, an excrementitious nitrogenous substance, and into a material for force production, which is non-nitrogenous. Similarly, the non-nitrogenous foods may be utilized in tissue formation. The main purposes of the two classes of foods, are, however, to repair waste of tissues, and evolve the necessary force for the performance of the various bodily functions.

The work contains a full account of all the substances used as foods, animal and vegetable; fruits, beverages, including alcoholic, beer and wine, etc. The preservation of food and the principles of dietetics are discussed in special chapters. The subject of the therapeutical applications of various diets is also considered, but, on the whole, not so fully as is desirable. A few formulæ for the preparation of diets for the sick are given, but this part of the work might be enlarged usefully. Finally the work concludes with the dietaries of the various London and Provincial hospitals.

From this sketch the reader will be able to form some conception of the value of the book. It is an important member of the series. The type is old and much worn, and the paper poor and thin. Better typography could be offered only at a higher price we suppose, and hence they must not grumble who choose to buy cheap works.

SOCIETY PROCEEDINGS.

RHODE ISLAND MEDICAL SOCIETY.

Quarterly Meeting, March 16, 1882.

The regular quarterly meeting of the Society was held March 16, in Lyceum Hall, Providence. About sixty Fellows were present. The President, Dr. Chas. O'Leary, occupied the chair.

The Secretary, Dr. Geo. D. Hersey, read the records of the last quarterly meeting, after which a committee was named by the Chair to nominate

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

This committee afterwards reported the names of the following gentlemen, who were elected Delegates: Drs. J. H. Eldridge, G. P. Baker, Ariel Ballou, Otis Bullock, W. E. Anthony, E. T. Caswell, Eugene Kingman, G. W. Jenckes, Job Kenyon, H. E. Turner, J. H. Morgan, F. B. Carpenter, A. A. Mann, and G. A. Pike. It was left for the President to appoint four additional delegates, and to fill all vacancies.

The report of the committee, appointed at a previous meeting, to lay the matter of

EXPERT TESTIMONY

before the State Legislature, was next called for. Dr. Job Kenyon, Chairman, said there was nothing definite to report, but he would offer the suggestion that a petition be drawn up and signed by the Fellows of the Society, addressed to the General Assembly of Rhode Island. He further remarked that the object in view was to secure legislative enactments regulating the fees of physicians giving testimony as experts before the Courts, and to remove the odium now attached to expert testimony. It was voted that such a petition be drawn up by the same committee.

THE REPORT OF THE BOARD OF CENSORS

was then presented by Dr. S. S. Keene, recommending to fellowship the following gentlemen: Gardner T. Swarts, M.D., Joseph N. Baretta, M.D., and Albert M. Knapp, M.D., all of Providence. The two first named were elected to membership, but the name and recommendation of Dr. Knapp, were referred back to the Board of Censors.

Dr. James Morton, of Providence, who had applied for membership, submitting to the Board of Censors a diploma from the "United States Medical College, of New York," signed by Drs. R. A. Gunn and J. H. Day, was not recommended for election, as the Board had no knowledge of the existence of such a medical school or faculty.

Dr. E. T. Caswell expressed his approval of the course taken by the Censors in their exercise of discrimination in the matter of diplomas, and said there had been great readiness in the past to accept anything in the shape of a diploma that might be presented.

Dr. S. S. Keene announced that at the next meeting of the Society he proposed to move that the By-laws be so amended as to require every applicant for fellowship to present himself in person before the Board of Censors, and undergo a satisfactory examination.

Dr. Ariel Ballou, of the Board of Censors, rose to explain why this change was desirable and necessary, and said that heretofore it had been regarded as sufficient if an applicant possessed a diploma emanating from some medical college recognized by the American Medical Association, but that experience had shown that application is frequently made by those having this qualification who are not worthy of membership.

Reports of cases were next called for. Dr. Lloyd Morton, of Pawtucket, described a

CASE OF HYDRONEPHROSIS,

in a woman sixty-two years old, who had been under his observation for several years. The passage of biliary calculi had been suspected from time to time, and cancer of the uterus was diagnosticated in February ult. Ten days before her death there was complete suppression of urine for forty-eight hours. She died in a state of uræmic coma. The *autopsy* revealed the presence of several calculi in the gall-bladder—two of large size, an inch or more in diameter, and very dense; also, that the right kidney had entirely disappeared, a sac containing serum being formed in its place. A *renal* calculus, the size of a large bean, was found firmly lodged in the right ureter, distant from the bladder about one-third the length of the ureter.

The interesting point in the case was that a renal calculus of that size could have passed so far along the ureter, and become impacted, without causing symptoms of its presence. The only time such symptoms were known to have existed was in December and January of the years 1869 and 1870, when there was lancinating pain in the right inguinal region, and shooting down the thigh.

Dr. E. T. Caswell, of Providence, reported a recent

CASE OF LITHOLAPAXY,

performed by himself, on a man sixty years of age, in rather delicate health, and who had been obliged to use a catheter habitually for the past six years on account of prostatic enlargement. The operation was done early in January last. A Thompson's lithotrite was used, and great difficulty was experienced after grasping the stone, in freeing it from the bladder-wall, so as to crush it, not, apparently, from its excessive size, but owing to the saculated condition of the lining membrane of the bladder. A curved tube, No. 26, French scale, was introduced, and, by means of Bigelow's evacuating apparatus, sixty-two grains of phosphatic calculus were removed. About an hour was consumed, and, although the anæsthetic (sulphuric ether) was well borne, it was thought best not to continue its use longer at the time, owing to the general condition of the patient and the time occupied, although it was certain that fragments of stone still remained in the bladder. For

two or three days subsequent, there was slight tenesmus, but no chill or fever. Orchitis developed two weeks later, but the patient had been subject to similar attacks before. In February the operation was repeated, and one hundred and seventy-four grains more of stone were removed, without the slightest unfavorable after-effects, and the patient soon regained his usual health and strength.

DR. CASWELL also called attention to a

FIBROID TUMOR OF THE UTERUS

he had recently removed, per vaginam, from a patient thirty-five years old. The growth weighed 1½ pounds, was 5½ inches long, 3½ inches in its broadest diameter, and about 2 inches thick, being narrower and thinner at one end than at the other. The smaller end of the tumor had presented at the os, and the attachment to the uterine wall embraced the whole of the distance from the os to the fundus, and one-eighth the circumference of the uterine cavity. Thompson's spoon-saw was the instrument used, and no hæmorrhage followed the operation, hot carbolized water being injected at once. The patient, who was under the care of another physician, did very well for three weeks, when septicæmic symptoms appeared, and she died at the end of five weeks. The time of the operation was less than an hour.

DR. WILLIAM H. PALMER, of Providence, next read a paper on

CRIMINAL RESPONSIBILITY.

The writer first defined law and crime, and said the "law presupposes, on the part of its subjects, a capability of receiving and understanding its requirements." He said: It is not easy for jurists to decide always who are competent to commit crime and who are really irresponsible on account of insanity, and the great question now asked of the medical profession by the courts is in regard to who are competent, in the eye of the law, to commit a criminal act and who are not? There is too much pseudo-philanthropy brought to bear on this subject. It is well known how often a criminal escapes punishment simply by the cleverness of his counsel in raising a plea of temporary insanity. This should be condemned as a mere sensational effort to prevent the punishment of the guilty. If a man *knows* that when under the influence of liquor he is liable to be quarrelsome and dangerous, and yet deliberately gets into a condition of intoxication, he is as morally responsible for any crime he may commit, while in that state, as though he did the deed after due deliberation and with wilful intent.

In regard to suicide, it is found to be most common in countries like the United States and France, where there is the greatest license to the individual, in thought, speech, and action, while, on the other hand, in Russia and Sweden, countries ruled by a monarchy, suicide is more rare.

The accessibility of means, the profession or pursuit of the individual, and a craving for notoriety after death, will exercise great influence in determining the means of death employed.

To protect the rights of society was said to be the highest object of law; and to protect the rights of the individual, the highest object of man.

The assassin of President Garfield was alluded to in these words: "The miserable Guiteau, undoubtedly insane in the opinion of most alienists, is at least disordered in mind and moral nature by his supreme vanity and egotism, and diseased by his private and social vices, yet the forethought and deliberation with which he assured the success of his crime, prove him capable of a sound reasoning process relative to its commission. Having wilfully debased his own nature, he is none the less responsible for the crime, which was the legitimate outcome of its debasement."

If there was that same irresistible impulse to enforce the punishment of crime that there is to defend it, on the ground of irresponsibility, there would be less crime committed. There is now a premium on crime which society cannot afford to pay. Based on the fact of an insane ancestor, or a recorded outburst of excessive anger, a person has a plenary indulgence to commit crime without the fear, or hardly the possibility, of punishment.

When juries shall be instructed to render a verdict of "guilty and insane;" when the responsibility of insane criminals is accepted, and penal institutions are provided for such a class, then the verdict of "not guilty," "by reason of insanity," will no longer be returned; there will be a more just conception of human accountability; and a more heroic exercise of the human will being demanded, will be exercised.

It was voted to refer Dr. Palmer's paper to the Committee on Publication.

DR. F. B. FULLER, of Pawtucket, then read a paper on

MANUAL DILATATION OF THE OS UTERI.

Among the conditions which may render rapid dilatation necessary, there were mentioned hæmorrhage, nausea and vomiting, chorea, albuminuria, contracted pelvis, and pelvic tumors. The necessity may not appear till labor is well advanced, and may then become very urgent. The various other means suggested for rapid dilatation were next alluded to by the writer. The hot vaginal douche is uncertain and tedious; rupture of the membrane may not be followed by delivery for three days; galvanism is not practicable. There are at least nine different metallic dilators and three kinds of water- or air-bags recommended; but their use is, in many cases, of doubtful efficacy. Inserting a flexible instrument between the membranes and the uterine wall is safe and often advisable.

There is no reliable oxytocic in the way of medicines. Manual dilatation may be a bold procedure, but there are several others now resorted to by the profession which formerly would hardly have been attempted or sanctioned, *e. g.*, the use of large probes in the lachrymal duct, and of large instruments in certain other instances. The arm is inserted into the rectum, and the female urethra is dilated by the finger and the bladder explored. Nature's method of dilating the os was said to be by forcing a bag of water into it, and this process may be closely imitated by the use of the hand—introducing first a finger, then a second finger, and gradually the whole hand. There is hardly any cervix that cannot be dilated, with perhaps the aid of an assistant. This method was once practised quite extensively in Europe. Reference was also made to a series of cases published by Dr. A. D. Sinclair, of Boston, in the Boston *Medical and Surgical Journal*, in February, 1875.

The chief advantages of the method were claimed by Dr. Fuller to be as follows:

(1) The hand is always available.

(2) It is easily governed by the operator.

(3) The *finger* can always be introduced into the os when anything can be.

(4) The finger and hand and the operator are in sympathy, so to speak.

(5) All artificial aids require *manual* assistance.

(6) As the surgeon can often use his finger better than any instrument, so it is with the obstetrician.

The writer knew of twenty-one or twenty-two reported cases, of which sixteen made rapid and perfect recoveries.

The practice of manual dilatation requires the exercise of great patience, and no direct force is to be used. A constant and slightly forcible pressure is necessary,

gently introducing one finger after another. The skilful operator will be surprised to see how easily the object is accomplished.

These objections were mentioned and answered as follows: On account of danger of abrasion of the soft parts; but this is not necessary any more than from the passage of the fœtal head. Again, because it is difficult to accomplish; but this need not deter any practitioner of fair skill. Third, shock to the mother. This is no greater than when other methods are employed, and is perhaps less. Its effect on the child need not prevent its use, as the conduct of the case does not differ in the least, so far as the child is concerned, whatever the method of dilatation.

Dr. W. G. Stanley, of Slatersville, R. I., said he had employed this method in several cases of placenta prævia where there was excessive hæmorrhage early in the labor, necessitating prompt delivery, and that he had been surprised at the ease and quickness with which the os could be sufficiently dilated by means of the hand alone, to admit of version and delivery. No unfavorable results to mother or child had occurred in any of his cases.

Dr. A. Ballou related five cases of convulsions occurring between the fifth and sixth month of pregnancy. There were no signs of labor at the time, but the convulsions were undoubtedly of puerperal origin. His treatment was the same in each case, namely, venesection and an opiate in full dose. Membranes ruptured by the finger. When the effects of the opiate subsided labor came on, and a safe delivery was accomplished in less than twenty-four hours, followed by the recovery of the mother.

Dr. Garvin, of Lonsdale, cited the case of a primipara eight months advanced in pregnancy. There was an escape of liquor amnii, but no dilatation of the os, or pain. Convulsions began, and four occurred. The patient was seen by Dr. Garvin two hours later, who at once administered three-quarter grains of morph. sulph., hypodermically. Another convulsion occurred in an hour, when one-half grain more of morphia was given in the same way. Manual dilatation was performed, and delivery followed, after which there were three or four more convulsions, making nine in all. The woman recovered.

Dr. Garvin further said he thought it made great difference in the matter of forcible dilatation whether the subject was a primipara or a multipara, and that in first labors it was usually a mistake to interfere with the os uteri or the membranes.

Dr. George Capron, of Providence, reported three cases of puerperal convulsions which had come under his observation.

Case I.—Puerperal convulsions, and the patient an unfit subject for venesection. Morph. sulph., one-third grain, was given hypodermically. Relaxation of the os soon occurred, and delivery was accomplished. In the course of a few hours there were five more convulsions, and the same dose of morphia combined with atropia, one-twentieth grain, was given, also an enema of ol. terebinth, ℥i. The patient recovered, there being no recurrence of the convulsions.

Case II.—Convulsions were occurring frequently, and labor was not far advanced. The pulse was not *full*, but was *hard*. The patient was at once bled to the amount of ℥xx. The child was soon born, and recovery followed.

Case III.—The woman was known to have albuminuria. At 9 A.M. true labor began, with the os high up and inclined backwards. At 1 P.M. there had been little progress, and a full dose of pulv. Dover was given. At 4 P.M. there had been very little advancement, and there was still much rigidity of the soft parts. At 3 the next A.M., just as the forceps were about to be applied, a convulsion occurred. Venesection to the amount of f℥xxiv. was at once performed, the forceps applied, and delivery slowly and with great care accomplished, which was followed by a severe hæmorrhage. A little later a singular fit or seizure took place, the woman being rigid and unconscious, but not convulsed. She recovered.

Dr. Capron then proceeded to remark: (1) The favorable effect venesection has upon the labor itself, promoting rather than retarding it. (2) It is not claimed that venesection always stops puerperal convulsions, but its tendency is to ward off a condition of profound coma and other brain troubles. (3) It is best to use, in case of puerperal convulsions, small and repeated doses of morphia, rather than the large doses, one-half grain to one grain, that have been advocated. (4) Puerperal convulsions are due to uræmic poisoning. (5) It is true that morphia may arrest and control the convulsions themselves, but will it antagonize uræmia and cure the case? (6) It would be necessary to know that in the uræmic state there is great tolerance of morphia before using it in so heroic doses.

Dr. Caswell remarked that he had recently read of a number of cases occurring in Australia, where morphia had been successfully used in the large doses referred to for arresting puerperal convulsions.

Drs. Parsons, Caswell, and Fisher, having been appointed a committee to draw up a memorial

RESOLUTION ON THE DEATH OF DR. DAVID KING,

now reported as follows:

"*Whereas*, It has come to the knowledge of this Society that David King, M.D., long an eminent member of this Association, and an ex-President thereof, died at Newport, R. I., on March 7, 1882; therefore,

"*Resolved*, That in the decease of Dr. King the Rhode Island Medical Society has lost one of its most respected and honored associates, a physician of large culture and rare judgment, and a gentleman of the utmost urbanity and courtesy of manner.

"*Resolved*, That his connection with various literary, historical, and scientific organizations has reflected credit on the Society and the profession of medicine.

"*Resolved*, That the above resolutions be communicated to the family of the deceased, with the expression of our sympathy."

The Society then adjourned.

NEWS ITEMS.

UTICA.

(*By Telegraph from our Special Correspondent.*)

Dr. John P. Gray's Condition.—Dr. Gray is doing well. He sits up a portion of every day. The wound shows considerable union by first intention.

The Hon. W. H. Bright, of Utica, Dr. C. F. MacDonald, of the Insane Asylum for Criminals, at Auburn, and Dr. Flandrau, of Rome, N. Y., have been appointed a commission to examine into the assailant Remshaw's mental condition.

For several days after the shooting Dr. Gray's face was so badly swollen that it was thought best to wait for a few days before giving any further description. A late examination with measurements disclosed the following facts: The bullet (38 calibre) entered Dr. Gray's face just six-eighths of an inch below the outer angle of the left eye, passed five and three-eighths inches through the face, back of the nose and out through the right cheek, two and one-eighth inches below the outer angle of the right eye and one inch back of a vertical line drawn from that point, and from thence into the window-casing about five feet

from where the Doctor sat. The left side of his face was dotted with powder. Dr. Gray says that he has been in the habit of looking up when he heard any one approaching his door, and did so on this occasion. This movement of habit undoubtedly saved his left eye, if it did not actually prevent the bullet from crushing through his brain.

Almost immediately the left eye was closed by the effusion of blood into the lids, and the tissues surrounding, and within a short time the right eye was in a similar condition. The apertures in the cheeks, made by the bullet, were about the size of a silver three-cent piece.

The swelling in the face extended so that before Friday morning it was distorted beyond all recognition, and Dr. Gray was only able to see a trifle out of the right eye. The swelling extended to the neck by the infiltration of blood and serum. There has been no appreciable fever.

CINCINNATI.

(*From our Special Correspondent.*)

THE CINCINNATI ACADEMY OF MEDICINE will remove its quarters next week to the new building erected for, or altered to accommodate, the *Lancet* and *Clinic Press*. The old room on College Street will be vacated with reluctance, as it is ground sacred in the history of medicine in this city for nearly half a century. There is a general feeling that a hearty effort would secure money enough to erect a new building, to be the exclusive property of the Academy. The meetings are well attended, the discussions are animated and scientific, and are regularly reported and published by an efficient secretary.

MEDICAL COLLEGES.—There is a rumor abroad to the effect that one of the various regular colleges in this city (what a pity that they are so various) is about to effect an entire reorganization; features of which will be the restoration of several formerly discarded members of its faculty, and a reduction of fees to the lowest figures. The fees, and other matters of general interest, having been formally agreed upon by committees from the various colleges, and the cut-throat policy abandoned for many years, it is probable that any violation of the articles of agreement will be fought by the other schools. It is said that the other schools will not recognize the diplomas of cheap or second-class colleges.

THE ASSOCIATION OF MEDICAL COLLEGES will probably convene in Cincinnati in May, and it is to be hoped that it will be able to accomplish something in the way of advancing the cause of medical instruction. But since so many of the Eastern schools have withdrawn from the organization, chiefly on account of the compulsory third-term clause, it is probable that the abolition of this clause will be the principal object accomplished at this session.

BROOKLYN.

(*From our Special Correspondent.*)

SEA-SIDE HOME.—Effort is being made by the representatives of the medical societies of Brooklyn, and others, to secure upon Coney Island an eligible site for the Sea-Side Home for sick children, which has abundantly proved its usefulness during several summers, and has outgrown its quarters as of late provided.

THE LONG ISLAND CITY BOARD OF HEALTH has been established by the Common Council of that city.

CANADA.

(*From our Special Correspondent.*)

DOCTORS IN CANADIAN LEGISLATURES.—In contrast to England, where not a single constituency is represented by a member of the profession, Canada appears to have an unusual number of medical politicians. In the Dominion Parliament there are, in the Senate, 6; in the House of Commons, 16; of these, one, Dr. Blanchet, is Speaker of the House, and Sir Charles Tupper (M.D., Edin.) is Minister of Railways. In the Provincial Legislatures, Nova Scotia has 3; New Brunswick, 2; Manitoba, 2; Ontario, 10; and Quebec, 10. In the last-named province, the Lieutenant-Governor is Dr. Louis Robitaille, and the Minister of Agriculture, Dr. Ross.

OBITUARY.—Dr. Horatio Yates, of Kingston, Ontario, died on the 10th ult. He was for many years Professor of Medicine in the College of Physicians and Surgeons of that city, and the leading physician in the district.

VIENNA.

(*From our Special Correspondent.*)

GYNECOLOGICAL NOTES.—*Metro-Phlebitis.*—A case which has attracted, quite recently, much attention in gynecological circles in Vienna, may possess some value in American eyes.

A woman, thirty-one years old, presented herself at the Department of Diseases of Women, K. K., Allgemeines Krankenhaus, complaining of uterine hæmorrhages, recurring at irregular intervals, for one year; at no time very great in quantity. She was examined, and a small vascular tumor was found to occupy completely the os uteri. With this exception, the genital organs were normal. She was admitted into the hospital, and, a few days later, she complained of pain in the pelvic region. She went to bed, and symptoms, analogous to those of the puerperal process, immediately set in. On the eighth day after the examination she died. The *autopsy* revealed the uterine veins filled with pus and a very slight degree of pelvic peritonitis. When the uterus was examined, a small, pedunculated, vascular, fibroid tumor, not larger than a raisin, was found to spring from the lateral wall, inner surface of the uterus, and extend through the cervix to the os uteri. The peduncle was twisted, and the fibroid tumor was congested and slightly gangrenous. It was supposed that in the examination, though very carefully conducted, the peduncle had been twisted, the nutrition of the tumor arrested, and a sufficient cause for gangrene and the resulting metro-phlebitis given.

Vesico-Vaginal Fistula.—In vesico-vaginal fistula, BILLROTH places his patient on her back, with the legs supported by assistants, as in lithotomy. To bring the parts in position, he employs Simon's speculum and spatula, and a number of retractors, held by assistants. The edges of the fistula are pared with right- and left-handed knives; the edges of the wound are united by silk sutures; the wound is thoroughly douched with a three per cent. solution of carbolic acid; and the vagina well plugged with iodoform gauze. The patient is catheterized, at regular intervals, for three days. The operation is very rapidly performed, and is usually attended with perfect success.

THE CHAIR OF PATHOLOGY, UNIVERSITY OF VIENNA.—Hans Kundrat, Professor of Pathology in Gratz, has been elected, within the last few days, to the chair of pathology, K. K., University of Vienna, made vacant, nine months since, by the death of Prof. Heschl. It will be remembered that this chair was first raised into prominence by the great labors of Rokitansky. Since Heschl's death, Prof. Chiari has lectured upon pathology. That the chair, formerly occupied by so great a master as Rokitansky, should be awarded to a man known to the world by no important original researches, and possessed of no special talent as teacher or lecturer, causes a great amount of secret discontent in

Viennese medical circles. It is rare, however, that such discontent finds audible expression, as the University of Vienna is truly a "Royal and Imperial" institution (Königliche und Kaiserliche). It appears that Prof. Kundrat's father is a valet to the emperor, and that, through his influence, Arnold, of Heidelberg, the choice of the Faculty of Medicine, was rejected.

Obstetrical Notes.—*Labor Complicated by an Enlarged Fœtal Liver.*—An unusual complication in labor occurred to-day in the lying-in ward of Prof. Josef Spaeth, K. K., Allgemeines Krankenhaus. The patient was thirty-five years old, a multipara, with no history of previous labor complications. The last pregnancy presented no features worthy of special notice. Yesterday she fell in labor at full term; the bag of waters ruptured early. The diagnosis of head presentation, second position, was easily made, and the heart of the fœtus was heard to beat regularly. Twenty-four hours later, after a tedious first-stage, the head was born, but the trunk did not follow. After waiting some minutes, the midwife called the second resident accoucheur, Dr. E. Ehrendorfer, for assistance. Vaginal examination revealed the mouth of the uterus tightly encircling the thorax of the fœtus, while the uterus was tetanically contracted. After ineffectual attempts at extraction of the fœtus, the woman was chloroformed, when the spasmodic contraction at once ceased, and the fœtus was drawn out of the cavity of the uterus dead. The abdomen of the child was enormously distended by a slightly elastic tumor, occupying the position of the liver. This tumor offered far more resistance to the maternal passages than the head. Upon opening the abdomen the liver was found to be immensely enlarged, occupying the greater portion of the abdominal cavity, and infiltrated with syphilitic gummata. The placenta, which came away naturally, presented to the naked eye no abnormal appearances.

Prophylaxis of Ophthalmia Neonatorum.—Credé has recently added to his 200 cases of observation of newly-born infants, 400 more. In 300 of these infants, at the same time with the first bath, both eyes of each child were carefully cleansed with a soft rag, and one drop of a two per cent. solution of nitrate of silver was let fall into each eye by means of a glass pipette. Although most of these children were born under most unfavorable conditions, in no case thus treated did ophthalmia neonatorum occur. Credé is very enthusiastic over this method of prevention of disease, and warmly recommends it as by far the most efficient means.

Ergot of Secale Cornutum.—The favorite oxytocic in Vienna is the ergot of secale cornutum. For administration by the mouth, an infusion is employed. For hypodermic medication a dialysed ergotin, prepared by a Parisian apothecary, E. Bombelou, is used. It is claimed that this preparation causes much less local irritation than the ergotin of Wiggins or Boujeau, and that it is much more rapidly absorbed, more efficient in its action.

Resignation of Prof. Gross.—On the 27th ult., Prof. Samuel D. Gross tendered to the Trustees of the Jefferson Medical College his resignation of the professorship of surgery which he has held in that institution for twenty-six years.

Dr. Gross is seventy-seven years of age, and, although still in the enjoyment of vigorous health, recognizes the wisdom of lightening his labors with advancing years. Dr. Gross's world-wide reputation as a surgeon, and popularity as a lecturer, have justly attracted large numbers of students to the Jefferson School, and his resignation is a serious loss to the Faculty and to medical education in Philadelphia.

The Public Health.—The following statistical data for the *week ending March 18*, were received too late for our last issue. During this week there were 22 deaths from *small-pox* in Chicago; 3 in Hudson Co., N. J.; 7 in Richmond, Va.; and 11 new cases in the District of Columbia; 8 in Richmond, and 2 in Detroit. *Cerebro-spinal meningitis* caused 2 deaths each in Chicago, Hudson Co., N. J., Detroit, and Buffalo; and 1 death each in San Francisco, Omaha, and Salt Lake City. The deaths from *croup* were 12 in Chicago, and 2 in Detroit. There were 9 deaths from *diphtheria* in Chicago, against 11 and 14 reported the two preceding weeks; 7 in Detroit; 4 in Hudson Co., N. J.; 4 in San Francisco; 3 each in the District of Columbia and Buffalo, and 1 in Salt Lake City, the first reported for several weeks. The deaths from *typhoid fever* were 5 in Chicago; 3 in Hudson Co., N. J.; 2 in Buffalo, and 1 each in the District of Columbia, Richmond, Nashville, San Francisco, and Salt Lake City. From *scarlet fever*, 3 deaths in Chicago; 7 in Hudson Co., N. J.; 3 in Buffalo; 2 each in Detroit and San Francisco, and 1 each in the District of Columbia and Nashville. From *measles*, 8 deaths in Chicago; 3 in Detroit; 1 in Buffalo, and 7 in San Francisco. From *whooping-cough*, 2 deaths each in San Francisco and Nashville, and 1 death each in Chicago and the District of Columbia. The last paragraph in the first column of page 337 refers to the mortality in the city of San Francisco.

The following is a brief statement of the principal features in the mortality returns for the *week ending March 25* in a number of prominent places:

Small-pox.—In Cincinnati, where this disease has been very prevalent, the returns for the week show a very marked falling off in the number of deaths as compared with several preceding weeks. In other places there is no special change in the mortality reports to be noted. There were 14 deaths in New York City; 11 in Philadelphia; 8 in Pittsburg, with 36 new cases; 22 in Cincinnati; 28 in Chicago; 2 in St. Louis; 1 in Dayton, O.; and 2 in Memphis. 13 new cases were reported during the week in Dayton, O.; 12 in St. Louis; and 2 in Milwaukee. The epidemic in South Bethlehem, Pa., appears to be rapidly abating. But few new cases have been reported during the week, though a number of deaths have occurred from among persons whose cases were included in the number reported the previous week. There have been 49 deaths up to and including the 28th of March.

Cerebro-spinal Meningitis.—But few deaths were caused by this disease during the week. New York City reports 5 deaths; Pittsburg and Chicago, each 3; Philadelphia and Cincinnati, each 2; and Memphis, 1 death from this cause. Elsewhere the disease does not appear in the mortuary returns.

Croup.—Ten out of eighteen places report deaths from croup as follows: New York City, 26; Philadelphia, 10; Chicago, 9; New Haven, 2; and Louisville, Milwaukee, Indianapolis, Pittsburg, Providence, and Nashville, each 1.

Diphtheria.—A further decrease in the number of deaths from diphtheria is noticed in Boston and New York City, and a slight increase in the number in Philadelphia. The returns, so far as received, are as follows: New York City, 33; Philadelphia, 10; Boston, 6; New Haven, 3; Chicago, 11; Pittsburg, Cincinnati, and Indianapolis, each 2; and Milwaukee, Louisville, St. Louis, Shreveport, and Dayton, O., each 1. There were 29 new cases reported in Boston during the week.

Scarlet Fever.—The deaths in New York City from scarlet fever were 82, while in the two preceding weeks the numbers were respectively 79 and 81. It is interesting to note the almost exact uniformity in these returns for several weeks in a population of over 1,000,000 of inhabitants. The disease also remains about sta-

tionary in Boston and Philadelphia. In the former city there were 2 deaths and 11 new cases; in the latter there were 7 deaths. In St. Louis there were 7 deaths.

Typhoid and Typhus Fevers.—It is noticeable that only 3 deaths occurred from typhoid fever in New York City, the smallest number reported for many weeks. In Philadelphia there were 13 deaths, an increase of 2 over the previous week; in Chicago, 8; in Indianapolis, 5; in Pittsburg, 4; in Boston and Cincinnati, each 2; and in Charleston, Milwaukee, and Louisville, each 1. Nine new cases were reported in Boston. The only city in which typhus fever appears to be present is New York, where there were 6 deaths during the week, an increase of 5 over the number reported the week previous.

Measles and *whooping-cough* do not appear to be very prevalent in any place except New York City. From measles there were 24 deaths in New York City; 9 in Chicago; 2 in Philadelphia; 3 in Pittsburg; and 1 in New Haven. Whooping-cough caused 14 deaths in New York City; 2 each in Chicago, Portland, and Providence; and 1 each in Philadelphia, Boston, Nashville, Dayton, O., and Milwaukee.

Consumption and Pneumonia.—By far the most prominent causes of death at this season of the year, with few exceptions, are consumption and pneumonia. The loss of life by these diseases is enormous. From consumption there were no less than 97 deaths in New York City; 53 in Philadelphia; 35 in Boston; 22 in Chicago; 12 in St. Louis; 9 in Pittsburg; 8 each in New Haven and Providence; 14 in Cincinnati; 11 in Louisville; 5 in Nashville; 4 in Dayton, O.; 2 each in Wilmington, Del., Indianapolis, Milwaukee, and Memphis; and 1 in Augusta. From pneumonia there were 101 deaths in New York City; 40 in Philadelphia; 32 in Chicago; 10 in St. Louis; 17 in Boston; 8 in Pittsburg; 6 in Cincinnati; 4 each in Providence and Louisville; 3 each in New Haven and Milwaukee; 2 each in Augusta and Indianapolis; and 1 each in Portland, Wilmington, Del., and Memphis.

Jacksonville, Fla., with a population of 8000, reports 5 deaths for the week from all causes, 4 of them occurring among non-residents.

Health in Michigan.—The State Board of Health Bulletin for the week ending March 18, 1882, indicates that neuralgia, intermittent fever, and erysipelas have increased, and that pneumonia, tonsillitis, rheumatism, and bronchitis have decreased considerably in area of prevalence.

Small-pox was reported at 4 places, as follows: At Spalding, Menominee Co., and among the Indians near Spalding, March 15; at Detroit, March 18; at Grand Rapids (1 new case from Chicago), March 21, 1882.

State Medical Society Meetings.—The Tennessee State Medical Society meets on April 4; the Kentucky State Medical Society at Louisville on April 5; and the Mississippi State Medical Association at Oxford on the same day.

Maine Medical School.—Dr. S. H. Weeks has been appointed to the Chair of Surgery in the Maine Medical School; Dr. Henry F. Gerrish, Lecturer on Anatomy, and Dr. Chas. O. Hunt, Lecturer on Materia Medica and Therapeutics.

Medical College Commencements.—The Medical College of Indiana held its Commencement on March 1, and conferred the degree of M.D. on 61 candidates.

The Central College of Physicians and Surgeons of Indianapolis held its Third Annual Commencement on the 28th of February. There were 8 graduates, 2 of whom were women.

The Commencement of the Memphis Hospital Medical College was held March 1, 36 degrees were granted.

The Medical Department of the University of Kansas held its first Annual Commencement on March 2, 10 degrees were conferred.

The Commencement of the Northwestern Medical College, St. Joseph, Mo., was held February 20, 7 degrees of M.D. were granted.

The Third Annual Commencement of the Southern Medical College of Atlanta, Ga., was held March 1, 47 degrees were granted.

Medical Literary Association.—A number of physicians of this city have permanently organized the D. Hayes Agnew Medical Literary Association by electing as officers for the current year: President, Dr. F. O. Nagle; Vice-President, Dr. G. P. Oliver; Secretary, Treasurer, and Librarian, Dr. G. Maxwell Christine. Among the objects of the association are the circulation of medical books, pamphlets, essays, and journals, and at the monthly meetings of the body discussion of subjects relative to the profession. The meetings are held on the evening of the first Tuesday in each month.

The Gross Medical and Surgical Society, named in honor of the distinguished Philadelphia surgeon, has recently been formed in Louisville, Ky., his old home.

L'Union Médicale.—Prof. Gustave Richelot has been appointed to the post of Chief Editor of "*L'Union Médicale*," in the place of Dr. Amédie Latour, who, after conducting the journal with vigor and ability during the thirty-five years of its existence, is compelled to retire on account of failing health.

The Radical Cure of Cancer.—Dr. J. Collins Warren who, in October last, was delegated to receive competing essays on the subject of the radical cure of malignant disease, announces that three essays were presented, but after due consideration of their merits it was decided that no essay was worthy of a prize. The same subject, namely, "The Probability of the Discovery of a Cure of Malignant Disease, and the Line of Study or Experimentation likely to bring such a Cure to light," is proposed for essays to be presented in competition not later than the first day of December, eighteen hundred and eighty-three (1883), to Dr. Warren who, with such assistance as he may select, will be the judge of their merits.

For the best essay on the above subject a prize of one thousand dollars will be given, the right being reserved to withhold the prize in case no essay of sufficient merit be presented. The essays must be legibly written in English, and neatly bound. Each one must bear a motto, and be accompanied by a sealed envelope bearing the same motto, and enclosing the name and address of the writer. They will all remain in the possession of the donor of the prize for convenience of reference, and the privilege is claimed to publish the successful one, with the name of the writer. No writer, however, surrenders the privilege of retaining a copy of his essay, and publishing it. The decision concerning the merits of the essays will be made chiefly from a practical standpoint, it being the object of the donor of the prize to obtain suggestions by which a search for a cure for cancer may be instituted.

Permanent Baths.—The *Tägliche Rundschau*, of Berlin, reports that a patient under the care of Prof. Langenbeck, of Berlin, underwent an operation last year, since which time he has passed twenty-four weeks lying in water, and has recently been discharged quite restored to health. It is remarked that the practical utility of permanent baths is rapidly gaining more gen-

eral recognition. In cases of severe burns, where the warmth of a bed is hurtful to patients, this system is said to be particularly applicable. Of course permanent baths cost a good deal, as an accurate regulation of temperature is needful if a patient remains in one for a length of time. The cost of gas for a bath is estimated at 150 marks (£7 10s.) per month.—*Lancet*, Feb. 25, 1882.

An Artificial Substitute for Quinia. — The progress of synthetic chemistry is said to have at last provided an effective substitute for quinia. This substance, chinoline, is, indeed, a derivative of the cinchono, and some other alkaloids, from which it was obtained by distillation, as long ago as 1842, by Gerhardt, who termed it, from its oily aspect, "quinolein." Soon afterwards Hofmann showed that it was identical with an organic base which Runge, in 1839, obtained from coal-tar, and which he had termed "leukoline." The remarkable fact that from coal-tar could be obtained the same base which was yielded by quinia has remained for forty years unnoticed, in spite of its suggestiveness. Lately chinoline has been found to possess considerable therapeutic value, and to be producible by a much simpler synthetic process. Skraup has ascertained that it may readily be produced by heating aniline or nitrobenzol with glycerine, and this process is now employed for its commercial preparation. According to Donath, Salkowski, and Loewy, chinoline is an efficient substitute for quinia in malarial fever, dose for dose, and sometimes it is even more certain in its action. Unfortunately, it causes considerable gastric irritation in some cases. It is an exceedingly powerful antiseptic agent, superior even to salicylic and carbolic acids, and seems likely to play an important part in the antiseptic surgery of the future. Most of its salts are deliquescent, but the tartrate is crystalline and stable; its cost is one-fifth that of quinia.

In a note published in the *Pharmaceutical Journal*, Mr. Charles Ekyn throws doubt, however, on the identity of most commercial preparations of chinoline, obtained from coal-tar, with the old leucoline produced by the distillation of cinchonine, etc. A specimen obtained from Germany as pure chinoline was found on analysis to consist for the most part of a mixture of aniline and nitrobenzol. Another specimen contained traces of these substances, and although it had the characteristic odor of chinoline and gave the proper reaction with potassium bichromate (a crystalline yellow precipitate), it did not form blue cyanine when treated with amyl iodide, although this reaction is readily obtained with pure chinoline (from cinchonine.) It is probable that the German so-called chinoline is a mixture of homologous bodies, and a thorough investigation into its properties seems desirable. It has been given abroad in large doses as a substitute for quinia, and it is needless to say that the presence of a considerable quantity of nitrobenzol would give rise to unpleasant effects.—*Lancet*, Feb. 25, 1882.

Red Sweat.—It has long been suspected that the red as well as the blue color occasionally observed in perspiration is due to the presence of bacteria. In a woman whose sweat, especially in the axillæ, had a red tinge, Hofmann, in 1873, found that uniform red masses adhered to the hairs, but he did not ascertain their nature. Pick observed in a peculiar case of skin disease reddish masses of bacteria on the hairs. Eberth noticed bacteria in yellow sweat. Additional observations of the same kind have been reported by Babesiu, of Pesth. A woman twenty-six years of age presented pale-red sweat in the right axilla, where the skin and hair were also slightly reddened. From time to time the perspiration became blood-red in color, associated with hysterical and nervous disturbances. A sister who slept with her also became affected in a similar manner, the perspiration in the right axilla becoming red. A third case presented itself in a young healthy man, who complained of occasional blood-red sweat; and a fourth in a young woman. In all the symptom was associated with troublesome itching. Microscopical investigation yielded in all the cases a similar result. The hairs of the axilla were thin, pale-red, brittle, and surrounded with a colloid-looking, rusty or bright-red sheath, in places of considerable thickness, and having a rough surface. It consisted of red masses presenting a radiating striation, more or less confluent, apparently proceeding from fibres of the cortex of the hair or from some broken part of its surface. The radiating striation was found to be due to the aggregation of round or ovoid bacteria, scarcely a micro-millimetre in diameter, which were united in zooglœa masses by a reddish intermediate substance. Nodular swellings on the hair were produced by an infiltration of the organism between the separated fibrils. The roots of the hair were free from bacteria. The red tint of the sweat was found to depend upon numerous roundish masses of zooglœa, resembling those of Bacterium prodigiosum. The bacteria were deeply colored by anilin and hæmatoxylin, and were rendered more distinct on the addition of acetic acid or liquor potassæ, while the zooglœa shrank under the influence of alcohol, ether, and turpentine. Sulphuric acid changed the red color to violet, and then to violet-blue. In sterilized culture solutions the bacteria multiplied slowly. The conclusions drawn from these observations are that the red sweat often found in the axilla is colored by a sphero-bacterium, the development of which gives rise to an excessive perspiration, and sometimes to brittleness of the hair, itching, and slight tinting of the skin. The red sweat appears to be contagious. The bacteria resemble, on the one hand, the colorless zooglœa found in hair, and, on the other, certain chromogenous bacteria, especially B. prodigiosum, from which it is distinguished by the brick-red color of the intermediate substance. It is more difficult to cultivate than B. prodigiosum, but gives essentially the same chemical reactions. — *Lancet*, March 11, 1882.

Congratulatory Address to the Queen.—At a meeting of the Royal College of Physicians, London, on Tuesday the 7th inst., the President alluded to the recent attempt to assassinate the Queen, and it was unanimously agreed that an address should be drawn up and presented to Her Majesty, and a Committee of Fellows was appointed for that purpose.—*Lancet*, March 11, 1882.

Harvey's Tomb.—At an extraordinary meeting of the College of Physicians of London, held February 23, Dr. B. W. Richardson informed the President and Fellows that he had recently visited the church at Hempstead, and had inspected the vault which contains the remains of Dr. William Harvey. The tower of the church had very lately suddenly fallen, but Harvey's coffin had fortunately not been injured. It was, however, so decayed and so exposed that the rain found ready access to the interior, and he felt sure that the College would desire that something should be done to insure the preservation of the remains of their illustrious Fellow and benefactor. It was resolved that a committee of five should be appointed, with the President and the Senior Censor, to consider what steps should be taken to insure the preservation of Harvey's remains, endangered by the falling of Hempstead Church, and to report to the College. The committee appointed were: Sir Risdon Bennett, Dr. Acland, Dr. Quain, Dr. Richardson, and Dr. Stewart.—*Med. Times and Gaz.*, March 11, 1882.

PLURAL BIRTHS.—In his last annual report on Bethnal Green, Dr. Bald mentions the occurrence of four births at one time—two boys and two girls. The girls were still-born; the boys lived forty-six and sixty-nine hours respectively.

JUMBO.—It seems that the sale of Jumbo, the pet elephant of the London Zoological Garden, was not due to signs of approaching insanity, but because of his having reached the period of life when he is capable of reproducing his species, and it is the fear of violence resulting from his forced continence which influenced the Council to part with him. Mr. Barnum has a family of elephants, and Jumbo will require soothing female influences for the next year or two.

WHAT IS SAID ABOUT THE NEW YORK CODE OF ETHICS.

So decided a step in advance, that we forbear to comment upon the trivialities and commonplaces that make up the bulk of the document.—*New York Medical Journal.*

Its adoption cannot be regarded as a retrograde step.—*Chicago Medical Review.*

The effect of a practice or ethical custom firmly established in such a centre as New York upon the general profession of the country must, in the course of years, be very marked.—*Philadelphia Medical Times.*

Will commend itself to many as the preferable guide to one physician's conduct towards another and to the public.—*Michigan Medical News.*

A step in the right direction, and is in so far a great improvement over the American Code. . . . It is impossible to resist the conviction that it is one of wise liberality.—*Medical Record.*

They have stood in the way of progress in therapeutics just as long as they dared, and have cracked the whip of medical exclusiveness and sectarian bigotry, until at last it has dawned upon their minds that they have frightened no one, but have aroused a feeling of contempt for their course among all frank, honest-thinking men, and what is more to the purpose in bringing them to their senses, are interfering with their own bread-winning. Is it any wonder that the old school, with a shrewd eye to the dollars and cents, are beginning to appreciate the fact that in the future sectarian utterances and exclusiveness in medicine will not pay?—*New York Medical Times* (Homœopathic).

The revision is of such a character that it bids fair to be the entering wedge to a general breaking up of old things and a liberation of the fossils of regularism.—*The Physio-Medical Journal.*

With all this millennium of homœopathy absorbing the old school, and both calling each other "regular," there is a dark cloud still hanging over their mutual admiration.—*Medical Tribune.* (?)

What does all this mean? It simply means that the code of ethics heretofore prohibiting members of the so-called regular profession from meeting eclectics and homœopaths in consultation is no more; that the effort to ostracize a large class of intelligent, well-educated, and enterprising physicians, by refusing to meet them in counsel, is no longer regarded as being expedient or humane in character. This is an important step in the right direction. . . . . We hope other societies will imitate the example of the New York State.—*The American Medical Journal* (Eclectic).

This action on the part of an influential society has opened the ethical door, through which many easy-going consciences can pass; but let us hope that the better portion of the profession will, as they always hitherto have, regard it honestly impossible to professionally meet those whose methods of curing disease they consider fallacious and invaluable.—*The Medical and Surgical Reporter.*

We must believe that a great mistake has been made by the Committee in revising the Code and by the Society in accepting it, and we trust that some effort will be made as early as possible to undo the wrong which has been done, we will say unconsciously, but it seems to us stupidly. We would not, of course, say intentionally.—*The Medical Gazette.*

The proposition of the Society of the State of New York to hold consultations with all legally-qualified practitioners of medicine, does not exclude the licensed cancer quack, the midwife, and the chiropodist. It embraces all the pathies. Now, this is called ethics, and we are plainly informed by the *Record* that this is reform. Fortunately, the provisions for enforcing this code of defiance to all ethics and common decency are limited to the prostitutes of professional morals, and the country may yet be saved.—*The Medical Herald.*

Cannot help regarding the movement as being very dangerous and unwise, and as being an important step in the direction of professional disintegration and decay. —E. R. Squibb, M.D., in *Ephemeris of Materia Medica.*

The door might thereby be thrown wide open for the entrance of numberless abuses, and the result be a perceptible lowering of the whole standard of medical ethics, already none too high.—*Buffalo Medical Journal.*

It is our belief, that however the commercial spirit may dominate the profession of the State of New York, it will not dominate every other State.—*The Detroit Lancet.*

The sole object in view in the adoption of this Code seems to have been to open the doors for consultation with irregulars.—*The Physician and Surgeon.*

But, surely, "the times are out of joint" most strangely when a medical society representing the professional dignity and intelligence embodied in that of the State of New York can by a two-thirds majority adopt a Code of Ethics expressly abandoning the clauses which forbid participation in the farce of consultation with the dogmatists of any exclusive therapeutic sect or school; and when a medical journal of the standing and previous respectability of the *New York Medical Record* can be found not only to connive at, but to defend the action.—*The Canadian Journal of Medical Science.*

How a code with such a clause could be adopted by a society in good standing, is absolutely incomprehensible.—*Gaillard's Medical Journal.*

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MARCH 20, TO MARCH 27, 1882.

ALEXANDER, R. H., *Major and Surgeon.*—Having reported at these Headquarters, will report to the Commanding Officer, District of New Mexico, Santa Fé, for duty as Attending Surgeon at District Headquarters, and Post Surgeon, Fort Marcy, New Mexico. —*S. O. 59, Department of the Missouri, March 20, 1882.*

TREMAINE, W. S., *Captain and Assistant Surgeon.*—Assigned to duty at Fort Porter, New York.—*S. O. 51, Department of the East, March 24, 1882.*

DICKSON, J. M., *Captain and Assistant Surgeon.*—Assigned to duty at Fort Adams, Rhode Island.—*S. O. 51, Department of the East, C. S.*

DICKSON, J. M., *Captain and Assistant Surgeon.*—So much of Paragraph 2, S. O. 51, C. S., as relates to him is revoked, and he will proceed to Fort McHenry, Maryland, and report to the Commanding Officer for duty at that Post.—*S. O. 52, Headquarters Department of the East, March 25, 1882.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

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LIBRARY

ORIGINAL LECTURES.

MULTIPLE CEREBRO-SPINAL SCLEROSIS.

A Clinical Lecture delivered at the Hospital of the Good Samaritan, Cincinnati, March 10, 1882.

BY JAS. T. WHITTAKER, M.D.,

PROFESSOR OF THEORY AND PRACTICE OF MEDICINE, MEDICAL COLLEGE OF OHIO.

(Reported by J. M. FRENCH, M.D., Assistant to the Chair of Practice.)

GENTLEMEN: We have to-day to study a rare case of organic disease of the nervous system. It is not a new disease that I show you here, but a disease of new recognition; a disease, the separation of which from other somewhat similar maladies, has put upon permanent record, and has contributed most to distinguish in neuropathology the name of the French physician, J. M. Charcot. For although his *sclerose en plaques* or *disseminèes* had been seen by many older clinicians, it was always confounded with other affections, some of like, some of grossly unlike, nature, until his work upon it gave us a distinct differential diagnosis at the bedside, and a distinct lesion at the autopsy.

So multiple cerebro-spinal sclerosis held about the same relation to paralysis—"shaking palsy" it was often called—as arthritis deformans to rheumatism; palsy, like rheumatism, was a convenient cover for a multitude of diseases; and just as out from under "rheumatism" have been taken acute polyarthritis, the chronic or monarticular, the muscular, gonorrhœal, and nodular forms, the various neuralgias, trichinosis, etc., have been uncovered and separated from palsy, cerebral hæmorrhages, thrombi, and emboli, paralysis agitans, progressive paralysis, muscular atrophy, in fact pretty much all the neuroses, including the scleroses, one rare form of which we have to observe and study to-day.

Sclerosis is, as you know, a comparatively new term in medicine. The old pathologists called the lesion a cirrhosis, a name which Laennec first gave to the induration of the liver. But sclerosis is a better word, because it means induration, whereas cirrhosis means only a yellow coloration. But the pathological process is the same under the old or the new name, and is the same whether we see it in the liver, the kidney, or the brain; it is everywhere a hyperplasia of the connective tissue, and is the type or representative of a chronic interstitial change.

You are, however, not to think when you hear the word sclerosis of a mere hypertrophy of existent connective tissue elements, or of the development of new connective tissue fibrils out of connective tissue corpuscles alone. You are to know that there is strong ground for believing that emigrated white blood corpuscles may also be transformed into connective tissue cells and fibres, and thus show a later stage or phase of a common inflammation.

When nerve-tissue suffers this sclerotic change, the disease-process shows itself in various ways. We know it best and see it oftenest, extending throughout whole columns of the spinal cord, as in locomotor ataxia, or in lateral sclerosis. The French pathologists speak of this process as a sclerosis in stripes or streaks. But I think we may find a better term, for a stripe or streak implies a mere surface change. I propose to borrow a word from the obstetricians, and call it a funicular or cord sclerosis. Sometimes, again, it picks upon or affects the anterior horns of gray matter, to give us the familiar symptoms of progressive muscular atrophy, or of infantile paralysis; sometimes it attacks or progressively invades the whole nervous system, as in dementia paralytica, or a great mass of it, a whole hemisphere for instance, a *sclerose en bloc*, as in the so-called diffused form of the disease; or is strictly confined to a limited region, as in unilateral facial atrophy, or in glosso-labio-laryngeal paralysis. Diabetes mellitus is believed by some of our best pathologists to be due to similar change, closely circumscribed about the origin of the pneumogastric nerve.

On the other hand, sclerosis sometimes appears in islets scattered here and there throughout the brain or cord, or both, to constitute the multiple cerebral, or spinal, or both, the multiple cerebro-spinal sclerosis, a case of which it is our fortune to see to-day. How we shall know this disease-process from the rest, how we shall be able to separate it from a common chorea, or a paralysis agitans, the diseases with which it is oftenest confounded, we shall learn in the observation of this case. For the main features of the disease in this case are so pronounced as to make the recognition of it easy.

Here is now a big, strong-looking man, who stands six feet, easy, as they say, in his shoes, who weighs one hundred and sixty pounds, a man with the build of a young Hercules originally, and yet, as you see, he cannot, with all his muscles, hold himself still; in fact, the more he tries to do it, the more violent his agitation becomes. We seat him in this large chair, and now his head begins to move backwards and forwards, quite rhythmically, you observe, but more and more violently; the face flushes, his eyes show that his brain reels: the sight of such distress is painful; we seize his head with both hands, and hold it to give him rest. You notice now that there is some twitching of the fingers, some jerking of the arms; occasionally his foot stamps upon the floor; notice, also, that his face flushes quickly, that his expression is listless, that the tongue is protruded slowly and somewhat tremulously, but without deflection to the right or left.

Now we will hear him talk, and you will pay attention not so much to what he says, for we will have Dr. French read for us the points in his history he has taken so much pains to compile, but to the manner of his saying it.

"What is your profession?"

"I am at–tor–ney at law."

"How long have you practised law?"

"I have not prac–tised it at all I on–ly be–gan to prac–tise when I was tak'n sick."

"What, in your opinion, was the cause of your trouble?"

"I know noth–ing to cause it."

"Could you drink from that glass of water on the table?"

"I would not like to try it; I would spill it on my–self."

This is enough. You notice the slow, drawling, monotonous speech, the disarticulation of words into syllables, an enunciation which must remind you of the days of school-life, in the process of scanning the Latin poets. Some fine observer has said that these patients talk like little children just learning to read.

Having seen, now, all the gross phenomena of this disease, we will stop for a while to hear the history of

this case, as prepared with great conscientiousness and, as I have asked him, with special reference to a possible cause, by our assistant, Dr. French:

E. J. G., attorney-at-law, twenty-six years of age, unmarried; is a native and resident of Cincinnati, but of Irish descent. In his family history, there is nothing of interest, except a direct line of phthisis on the paternal side; the father, and nearly all of his family, having died of that disease. No trace of nervous disease or specific taint can be discovered on either side of the house. The mother is living, and in perfect health. The patient is the third and only surviving child. The others, five in number—four boys and one girl—all died before attaining the age of three years. The first child lived the longest, the last, the shortest time. Of the causes of their deaths, it is only known that one died of phthisis, one from malnutrition, during an illness of the mother, and one lived but a few hours after birth.

The patient, though he appeared rugged, was never strong. He is tall and slender, and was always round-shouldered, and had a slight cough. He has, however, had no decided illness but measles and whooping-cough. He has always been temperate in his habits. He disclaims all possibility of ever having contracted syphilis. A cautious but persistent cross-examination, however, elicited, in this connection, the following facts: He has had gonorrhœa. He never had a chancre; but he admits that, about four years ago (his memory of dates is poor), he had, on two separate occasions, a cluster of warts upon the glans penis, which were removed by caustic applications. He denies the existence then, or previously, of any sore at this point, though the description he gives of them corresponds to condylomata surrounding a chancre. Not far from the time of these warts there occurred, on the inner aspect of the left arm, a little distance above the elbow—evidently at the location of the epitrochlear gland—a very painful swelling, that went on to suppuration, ruptured, and healed rapidly. A similar swelling occurred at a corresponding point on the right arm, but subsided without suppuration. He had, also, almost at the same time, an abscess in the right groin, that was poulticed, and evacuated by incision. He positively denies having ever had any eruption upon his skin, except at two points, one on each leg, at unequal distances below the knee. The cicatrices left by them resemble those of a successful vaccination, with the exception that they are studded with small pigmented spots. There are numerous small pigmentary spots over the surface of his body. He has never had a sore throat, never lost his hair, has had no disease of the eyes, and never suffered from rheumatism, until during the present winter, when he has had slight pains in the tibial regions.

The earliest symptoms of his present illness were observed about five years ago, soon after he was admitted to the bar. He was then reprimanded by his preceptor for carelessness in his penmanship. Although he thought little of it at the time, he could but notice that his writing was becoming illegible; even more so than the average legal hand. With this he felt an aversion to the use of the pen, which increased, until he finally employed an amanuensis. About this time, too, he was highly insulted by a colleague asking him if he had not St. Vitus's dance, because, as he stated, his head was so unsteady when he walked. It was not long after that he noticed a sensation in the back of his neck, as if his head were not set straight. Then there was the pain, as of a cramp in the occipital region. About three months later—two years and three months ago—his hands became tremulous. About one year ago his legs became affected, and in the last six months the tremor has reached his jaws and tongue.

At present there is scarcely a voluntary muscle in his body, except those of the face, that is not affected, and the choreic movements are at times most violent. In order to remain quiet he must sit in a large chair, his head well supported, his feet elevated, and his hands in some way confined. Once this position is broken, or upon the least excitement or effort of volition, his head is tossed about violently, his hands break into convulsive movements, and his legs make several plunges. His will seems to have no other control over the movements than that it can guide his head and limbs into the positions least favoring the attacks. The jaw is always in motion when the teeth are not set. The tongue is very slightly affected. When his eyes are at rest, there is a slight internal deviation of the right. This is of recent date. He has never had nystagmus. The patient can walk, but with some difficulty. He talks slowly, drawling out his words monotonously. His mental faculties seem unimpaired, unless his faulty memory of names and dates be of recent acquirement. During sleep all movements subside. He has a good appetite, and sleeps well. He has taken a large number of drugs, among which he can name potassium bromide, assafœtida, valerian, nux vomica, and the various metals, none of which, as administered, had any influence on the disease.

Let us now consider the points in this disease as illustrated in this particular case.

Our patient is a professional man, aged twenty-six. There is nothing in his avocation that has any bearing upon the genesis of the disease, as the subjects of it come indiscriminately from every kind of calling. That most of them belong to the working class, is to be explained by the fact that most people belong to this class. True, the working class is most exposed to "cold," and for a cause of many cases of sclerosis we have still to take refuge under "cold," but exposure and attack are very different things. Statistics show us that they who are exposed most suffer least. People who live in a house climate contract more "colds" than those who live outdoors. The eloquence of figures in this regard is shown in the statement of Geigel, of Würzburg, that more legitimate than illegitimate children die of respiratory diseases in the first year of life. But we must not forget that the working classes in cities spend most of their lives in the worst kind of house climate, in factories and shops.

The subject of "cold" has a new etiologic interest since the discovery of Rossbach that the normal parasites of the animal body, present only in innocuous numbers, may be multiplied, even within one hour, to the point of danger, after the introduction into the body of substances or agents, like papayotin, entirely free of organisms of any kind. Perhaps we shall find in the process of "catching cold" some such explanation of its varied effects, and shall thus be relieved of the necessity of seeking shelter under the "*locus minoris resistentiæ*," the exile of refugees.

Aged twenty-six. Multiple sclerosis, for the most part, attacks the period of the vigor of life. From twenty to forty is the classical time for the first manifestation of this disease. For this reason alone the disease is known not to be associated with the degenerative changes of senescence, but is rather to be allied to infectious disease, as perhaps one of its remote effects. And we have here, also, an important point in differential diagnosis. For the two diseases with which we are most likely to confound it, paralysis agitans and chorea, attack by preference the extremes of life; paralysis agitans rarely appearing before fifty, and chorea before twenty. At the same time it must be admitted that cases of insular or multiple sclerosis do exceptionally occur both early and late in life. Thus, Leube records a case at the age of seven, and Strümpel a case at the age of seventy-nine.

Women, much oftener than men, are attacked by this

disease. In fact we are justified in saying, from statistics, that up to the present time three-fourths of all the cases belong to the female sex. Such a striking preference of sex is, of course, a very significant etiological fact. It points to the role of the emotions, as either the predisposing or exciting cause in the production of the disease. In this connection there has recently been made a curious statement, of much interest concerning dementia paralytica, a disease which shows somewhat similar, though much more diffuse, lesions in the brain. Dr. Grieve, of the asylum in British Guiana, observes, with astonishment at first, that this disease, which constitutes such a large contingent of cases in the asylums of Europe, is, in his institution, hardly represented at all, and he discovers, as the only possible explanation of its absence, the mental stagnation of the people. This observation is in support of an opinion previously expressed by Crichton Browne, to the effect that the lesions of this disease represent a later stage of a cortical hyperæmia exalted beyond the physiological limits by intense or continuous mental excitement or emotion.

But neither "cold" nor emotional disturbance are admitted, or could be accepted, as the probable cause of the disease in this case.

Notwithstanding his protestations, it is difficult not to believe that our patient has had syphilis. Enlarged lymphatics, cutaneous cicatrices, tibial pains, constitute a train of symptoms that may hardly be attributed to any other cause. We are led to fix upon this view all the more earnestly because of the absence of any other discoverable cause, and we might say more eagerly because it may offer some, however slight, hope of relief. Syphilis is the type of the slow blood poisons, the most familiar of all in its immediate and remote effects. Prominent among these latter is a well-known, we might say the best known of all the scleroses, locomotor ataxia, five-sixths of the cases of which are due to this cause. And while it would not be wise to declare syphilis as the absolute cause of this case, it would be unwise to ignore it as the probable cause. For diseases no more than parasites spring up spontaneously in the body of man.

A disinclination, dependent upon a manifest inability, to the use of the pen, was the first signal of the approach of the disease in this case. We always dislike to do, and, finally, refrain from doing, what we cannot do to our own or to others' satisfaction. In other words, the disease began here with a paresis of the upper extremity. There was forming at this time an islet of sclerosis in the cervical cord. There soon followed a peculiar sensation in the back of the neck, "as if his head were not set straight," and soon thereafter an unsteadiness of gait, simulating chorea. Scattered islets were now developing along the anterolateral columns of the cord. In three months began the characteristic symptom, tremor of the hands, and this tremor gradually invaded all the muscles, until now it is almost universal.

But not every case of multiple sclerosis begins with tremor. Indeed, a few cases never show it at all. You can easily see that the symptoms of inception, of any stage, or of the whole course of the disease, will vary according to the seat of the lesion in the brain or cord. Some cases begin with epilepsy, some with apoplexy, some with pain, some with disturbance of special sense, some with derangement of the mind. Shift the lesions and the symptoms shift. We may say of the clinical history of the multiple scleroses that it is kaleidoscopic. But tremor is a marked and most characteristic sign of the disease. Until tremor shows itself the diagnosis is uncertain, and upon the peculiarity of it we make our differential diagnosis.

The tremor of this disease is very different from that of chorea. The truth is, there is no tremor in true chorea. The movements of chorea are convulsive; they are irregular, bizarre, fantastic. But the tremor of multiple sclerosis is rhythmic, it is in the line of muscular contraction, and above all things it is only present under effort. A patient with well-marked chorea can hardly seize the glass of water, and, having seized it, throws its contents right and left, or over his head. A patient with sclerosis can take hold of it and carry it tremulously to his lips, where it will clatter against his teeth.

The tremor of this disease is very different, also, from that of paralysis agitans, or true shaking palsy. We should not look for paralysis agitans in a patient so young, as it shows itself rarely before fifty. Moreover, it is constant, is confined for the most part to the head or hands, and is not associated with the manifold other symptoms of multiple sclerosis. The tremor of paralysis agitans is often checked by effort. Indeed, some of these patients must keep up continuous volitional motion to secure relief and rest.

Two years our patient has had this disease, and he may have it ten. The duration of it will depend upon the situation of the sclerotic patches, or upon the rapidity of their dissemination.

We shall put him at once upon the so-called specific treatment, and to avoid salivation we will give him the combination of the bichloride of mercury with the iodide of potassium, that we may keep him gently under their influence for a long time. There is not much hope of relief; I may say this freely, now that our patient is dismissed; because the damage has been already done. He approved of the trial of the treatment himself with the facetious remark—all the more facetious because of his mode of utterance—"that he did not believe it would do any good, but it might be wise to shell the woods, anyhow."

This case makes a picture for us that will remain fixed in our minds. We shall all recall it in the presence of every case of so-called "shaking palsy;" and just as the study of progressive muscular atrophy lent a new interest to so-called "wasting palsy," and of dementia paralytica, to the whole subject of palsy in the insane, will the study of this case excite in us henceforth a new interest in every case of "shaking palsy."

ORIGINAL ARTICLES.

THE EXTERNAL APPLICATION OF CARBON DISULPHIDE FOR THE RELIEF OF NEURALGIC PAINS.

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Carbon disulphide, bisulphide of carbon, or, as it is commonly known, the bisulphuret of carbon, is a colorless, transparent, exceedingly volatile liquid, having a sp. gr. of 1272, and a boiling point of 47° Fahr., a pungent, aromatic taste, and, in the unpurified state, a disagreeable, fetid, nauseating odor, not unlike that of decaying vegetable matter. This latter attribute applies to the article as found in commerce, but in its purified condition it presents an ethereal odor, not very disagreeable except, perhaps, to particularly sensitive noses. It is also exceedingly inflammable, burning with a pretty bluish flame, depositing free sulphur in a finely divided state. It mixes freely with alcohol, ether, the ethereal and fatty oils, but it is almost insoluble in water; however, when shaken up with it falling down as globular drops, imparting to the water its peculiar

taste and smell. Regarding its solvent properties, it dissolves phosphorus, sulphur, bromine, iodine, caoutchouc, and the solid fats. As before stated, it is exceedingly volatile, its vapor forming a highly explosive mixture with the air.

It was discovered in 1796, by Lampadius, but it was not until 1826 that he described its preparation, properties, and medicinal uses in a monograph entitled *Ueber den Schwefelalkohol, etc.*, Frieb., 1826, a second edition appearing in 1833. He recommended it principally against rheumatic and gouty troubles, given internally and applied externally, and relates that in Frieberg a mixture of one part of camphor, two of carbon disulphide, and four of alcohol was a very common external application in rheumatic pains. He also speaks of it as being useful in instances of slight burns. Since his time it has been frequently employed against rheumatic and gouty affections by Beasley, Wutzer, Otto, and Mansfield, all of whom claim good results, more especially in those cases unaccompanied by febrile movement, or where the fever was but slight. In such cases the remedy was given internally in doses of gtt. v. in alcohol, every two hours, while the affected part was rubbed with an embrocation consisting of one part bisulphide and four of olive oil. Otto states that his cases were cured in from eight to fifteen days, adding, however, that it was useless in instances of "deep-rooted dyscrasies." For external application in similar cases, Wutzer recommended a liniment of carbon disulphide, ʒij, spirits of camphor, ʒiv. Tried at the Berlin Charité in chronic rheumatism, it was found of no avail. Of late years it has justly, I think, fallen into disuse as regards its application in gouty and rheumatic complaints, no one, as far as I am aware, at present using it against these maladies.

For the relief of after-pains it has also been employed by Mansfield, and apparently with benefit. He affirms that good results were obtained from it even when ergot had failed. His method of applying it consisted simply in rubbing the pure bisulphide over the abdomen.

The first to directly call the attention of the profession to the topical use of this remedy for the relief of pain of the neuralgic type was Schiel, of St. Louis, in an article published in the *St. Louis Med. and Surg. Journ.*, January, 1857, in which he pointed out its employment in facial neuralgia, odontalgia, and similar affections. He proceeded by pouring a mixture of equal parts of alcohol and the bisulphide upon some new cotton, which was then rubbed vigorously for five or six seconds over the affected part, a measure which, he claimed, was followed by marked relief. Later, Kennion (*British Med. Journ.*, June 13, 1868, p. 584,) again drew attention to the efficacy of the remedy when locally applied in the relief of the various varieties of headaches. He writes, "I have not the least claim to the discovery of this remedy, nor, indeed, am I at all aware who was its originator. I have used it for twelve months in a very large number of cases, and very rarely without affording immediate relief." He found that the class of headaches in which it is chiefly useful are those which have been classified as nervous, such as the neuralgic, the periodic, and the hysterical. He has even found it useful, he states, in many kinds of dyspeptic headache. While not claiming the cure of the trouble, he simply expects its relief. Thus, he says, "although the relief of a symptom is a very different affair, of course, from the removal of its cause, yet no one who has witnessed (and who of us has not seen?) the agony and distress occasioned by severe and repeated headache, but must rejoice in having the power of affording relief in so prompt and simple a manner."

However, in spite of these positive statements, the remedy seems to have been forgotten, for nothing is heard of it until 1872, when Dr. S. R. Nessley, of Ohio, again drew attention to the drug in the *Journal of Materia Medica*. He employed it against facial neuralgia, hemicrania, odontalgia, and lumbago, obtaining, he states, in nearly every instance almost instantaneous relief. It is no more than fair to state, however, that Dr. H. C. Wood, commenting in *New Remedies*, vol. i., 1872, p. 125, on Dr. Nessley's article, remarks that in his hands the remedy has failed in facial neuralgia, adding, however, by reason of its "producing so much pain, patients refuse it a fair trial." In the *U. S. Dispensatory*, 13th Ed., Phila., 1873, I find the statement that Dr. C. G. Page, of Boston, has used the vapor with advantage for the alleviation of local pain, but no reference to the source from whence this is obtained is given.

The foregoing is all that has been written of the topical applications of this little-known remedy as an agent for the relief of pain; and, as far as I have been able to determine, its employment in this direction at least has at present fallen entirely into disuse. I first began to employ it for the relief of pain while Interne in Bellevue Hospital, in 1876–77, and since then have used it in hundreds of cases, sometimes giving complete relief, at times producing but partial alleviation, not infrequently failing entirely, while in a small percentage, absolute and entire cure followed its application. By these successes and failures I now consider myself in a position to point out when the remedy will be useful; when useless. I began by applying it indiscriminately in all cases where pain appeared as a symptom, and met with frequent failures, but as time went on I gradually narrowed the field of its application, till at present, I believe I have pretty accurately determined the limits of its usefulness.

In all cases of pain symptomatic of inflammatory or organic changes, as in pleurisy, pericarditis, abscess, necrosis, tumors, and the like, it is of little or no benefit; in fact, in all cases dependent upon organic changes, or where appreciable pathological conditions involve the nerve it is idle to expect any relief from its use. Only to those cases which may be styled the pure neuralgiæ is it found efficacious, and here it has seldom failed me; in the large majority of instances the relief has been complete and almost instantaneous, seldom has it been but partial and delayed, and in only a very few cases has it absolutely failed. In these last instances, where failure has been reported, the remedy had been applied by the patient.

As far as I can remember, in no case of simple and pure neuralgic pain have I met with failure when I have myself applied the remedy. Sometimes, it is true, the relief has been but partial, but even here repeated application has been followed by success, or the suffering has steadily though not completely diminished. In some instances actual cure has followed repeated employment of this agent, though it must be confessed that such cases have been few. I have employed it against a large number of cases of neuralgia of the various branches of the fifth pair, in occipital, cervical, intercostal, and sciatic neuralgiæ, and have seldom failed to give relief. Repeated applications on recurrence of the pain, gave similar results, save in a very few cases. Cure has followed in two cases of sciatica, in one of which both nerves were involved, in one instance of occipito-cervical neuralgia, and in several patients suffering from involvement of the supra-orbital branch of the trifacial.

I have met with some success in lumbago, but would not place much reliance upon it in the alleviation of the pain of this complaint. In cephalalgia, belonging to the so-called nervous class, success uniformly followed the application of the drug. In this my experience agrees with that of Kennion. Against organic headache it is of but little avail.

As regards its mode of application, several methods might be indicated; but that which I have always employed with the best results is as follows: A ball of ordinary cotton-batting is drawn out into a conical shape, and upon the apex of this cone five or ten drops of the bisulphide are poured. The cone is then inverted and pressed firmly over the painful part, the object being to prevent volatilization of the drug. The place of application is of prime importance. I generally search carefully for the point of greatest pain, that is, the seat of the so-called *tic*, and here the point of the cone is pressed. If I cannot find this, I request the patient to indicate with his finger the place where the pain is most severely felt, and here I make my application. Where the pain is wide-spread, the application may be made at several points. In cephalalgia the mastoid processes on the temples were usually selected, but in some cases where the pain is principally vertical or frontal, we may apply it at the vertex or middle of the forehead. In applications about the face, the patient should be requested to close the eyes, as some irritation and lachrymation may otherwise follow. If the pain return, which it is apt to do after some hours or days, the application may be repeated as often as necessary without the slightest fear of trouble following. I have yet to meet with a case of any accident of any kind whatever.

The length of application is governed by the sensations of the patient only, and hence varies in different individuals. Usually in about a half a minute or a minute the patient begins to feel a sensation of warmth at the point of application. This steadily increases until it reaches a point when it can no longer be endured, being described as not unlike the burning of a coal of fire. The patient is told to endure it as long as he comfortably can, removing it as soon as it becomes in the least bit unbearable. This period will, of course, vary with the varying susceptibility of different patients, some requiring the cotton to be withdrawn almost immediately, others allowing it to remain some two, three, or four minutes, and some even longer. The relief given is almost instantaneous. The local effects produced are usually reddening of the skin over a varying area and to a varying degree, and the deposit of a faint white powdery film on evaporation of the drug. This latter may be easily washed off, while the former slowly but steadily vanishes. The pain produced as a rule disappears in about a ratio inverse to its appearance, and with it the pain of the original trouble will be found to have in great part or entirely vanished. It does not vesicate or blister, the only visible local condition following as a result of its action being the hyperæmia of the skin and the powdery deposit already noted.

Two objections may perhaps be urged against the employment of the bisulphide: 1, its bad odor; 2, its production of pain. As regards the first, if the ordinary article of commerce be used, the objection holds good, but we have in the market a form of the agent to which this does not apply; for by purification its bad odor can be in great part gotten rid of and an article obtained having an ethereal, somewhat aromatic smell, disagreeable, as far as my experience goes, to but few persons. Besides, if relief be obtained by the patient, all objection respecting its odor on his part will soon cease, and none will refuse its further employment. There are many agents commonly used in medicine whose odor is far more unpleasant than is this, but few object to them. As far as the production of pain is concerned, it is to be borne in mind that the discomfort produced is merely transient, need never be to an unbearable degree, the patient's own sensations being in every case consulted, and when it is remembered that it overcomes in many cases a pain far more intense than that which it produces, this can hardly be urged as a valid objection to its employment. Many remedies are employed for their local effects against pain which produce much more inconvenience and suffering, both as regards intensity and duration, than does the disulphide of carbon, as for instance, blisters, the actual cautery, tinct. iodine, yet they are measures of ordinary and daily application. I have never yet met with a case where the patient refused further use of the drug either on account of its unpleasant odor or the pain produced by it, and I have employed it during the last six years in scores of cases, male and female, young and old.

Kennion, already quoted, although expressing himself as in doubt, was disposed to attribute the benefit obtained from the application to the sedative effect of the vapor of the bisulphide, by absorption through the skin, and thus acting upon the superficial nerves of the part. Napheys (*Modern Therapeutics*, 1877, p. 49), coincides with this opinion. Pereira, on the contrary, speaks of it as an acrid local irritant. As for myself, I have as yet been unable to reach a positive conclusion respecting its *modus operandi*, though inclining to the belief that it acts simply as an intense, rapidly acting, and transient

local counter-irritant, not as a local anæsthetic. I have, in many cases, tested the sensation of the part to which the application had been made, and have, in the large majority of instances, found it normal; in a very few hyperæsthesia existed, while in a small percentage slight anæsthesia was noted. I remember but one instance where complete local anæsthesia was induced, the application being made to relieve the pain of a perihepatitis, but, in this case, no benefit, however, followed.

To sum up, I would recommend the use of the carbon disulphide only against the pure neuralgiæ and cephalalgiæ of the nervous type. Cure need not be expected, though relief, more or less complete, is, in the large percentage of cases, obtained. The application must be to the point or points of greatest pain, and need only be persisted in as long as the patient can comfortably bear it. It may be repeated as often as the pain recurs, and no evil effects will follow, no matter how often or how numerous the applications.

The following are a few of many cases which might be quoted to prove its efficacy:

CASE I.—P. M——, æt. thirty-two, fireman, first seen December 18, 1877, was attacked three weeks ago with severe pain over the region of the right sacro-sciatic foramen, radiating down the thigh and leg to the ankle and foot, with tenderness over the same regions. The pain was intense, but he was able to work up to the time of coming under observation. When seen, was able to walk a little, but was suffering intensely with pain along the course of the right great sciatic nerve. Tenderness, on pressure, marked; especially over the sacro-sciatic foramen.

Treatment.—Rest in bed, with hypodermics of aqua pura, ʒss., morning and evening, along the nerve.

December 24. Still in bed; has improved somewhat under the use of the water, but the relief was, in such instances, merely transient, necessitating the use of hypodermics of morphia and atropia at night.

29th. Much better and out of bed; treatment as before.

January 4, 1878. On Sunday, the 30th of December, the left lower extremity was attacked, but the pain was not very severe. Treatment as before, with liq. potass. arsenit., ɱv., and tr. ferri chloridi, ɱxxijss. t.i.d., added.

15th. Steady improvement; has only occasional shooting pains.

February 1. Pain to-day returned in the right leg with its former violence. Gave morph. sulph. and atrop. sulph. hypodermically, which relieved for a time. Applied blister over exit of the nerve, with but little benefit.

2d. Pain very bad; used the carbon bisulphide for the first time, relieving him almost instantly. Complete absence of pain for fully three hours. Repetition of the application produced similar happy results. Treatment to be tr. gelsem., ɱv. t.i.d., and applications of the bisulphide as indicated.

9th. Better; since last note has had occasional attacks of pain, but not of a very severe character, coming on usually towards evening. The bisulphide continued with good results, the pain disappearing for several hours after its use.

21st. The improvement steadily continued, and today he was discharged cured.

CASE II.—Patrick Y——, æt. thirty-four, tailor, admitted January 3, 1878; when first seen, was suffering from left-sided sciatica. Various measures were used for the relief of his pain, such as hypodermics of morphia, atropia, blisters, the internal administration of arsenic, iron, quinine, etc., with but partial and transient success. On February 2, the same day as in the foregoing case, the bisulphide was applied over the sacro-sciatic foramen, the point of greatest pain on pressure, with immediate relief. At first the benefit from the application was more marked than in the previous case, but later on the relief was only for several hours. Finally, under the repeated use of the drug, the pain entirely ceased. I must add that he also began to take the tr. gelsem., ɱv. t.i.d., at the same time that the bisulphide was commenced, and continued to take it up to the time of his discharge, March 7. The result was a perfect cure.

CASE III.—Ann M——, æt. thirty-four, admitted February 20, 1878, had been suffering for several days from intense pain over the right gluteal region. When seen the pain was principally located over the crest of the ileum, especially over its anterior portion, the pain on pressure being more marked as the anterior superior spinous process was approached, being most intense at this point. She was given a hypodermic of water, ʒss., over the seat of pain, giving relief, but in the course of a few hours it returned with increased intensity. A large blister was then applied. As long as this remained there was no pain, the latter returning as soon as it had healed. February 27, the bisulphide was applied over the anterior portion of the crest of the ileum, with immediate relief. In this case the benefit derived was more pronounced and prolonged than in the previous cases. Altogether, but two applications were made, and the patient felt so well that on March 2 she requested her discharge.

CASE IV.—The next case was one of neuralgia of the fifth nerve, in which everything, even hypodermics, failed. The bisulphide was applied, and the pain disappeared as if by magic. A second recurrence of the neuralgic attack was overcome in a like manner. This was a case of tic douloureux, occurring only at long intervals, hence, although there was probably no cure, the benefit was so marked that for the time being it became equivalent to one. This patient was lost sight of.

CASE V.—A case of nervous headache in a female, æt. twenty-two. In this patient the attacks usually lasted the entire day. When seen had been suffering for two hours. Relief was immediate, all that remained of the cephalalgia being, as the patient described it, "a queer feeling in the head."

CASE VI.—Sciatica, existing for several months; treatment by morphia, hypodermically, and by various internal anti-neuralgic remedies, merely gave relief. The bisulphide was applied, and was followed by immediate disappearance of the pain. Since then there has been no recurrence, an occasional sense of stiffness in the limb being only noted. It is nothing but fair to state that for a few days previous to the application there had been steady improvement, although all treatment had been abandoned by the patient. The pain, however, at the time, was pretty severe.

CASE VII.—An instance of cervico-occipital neuralgia in a female, lasting for years. Various forms of treatment had been tried, even the cautery had been applied without success. The applications were made to the vertex, occiput, and nape of neck, about twice a week for a month, each time giving relief. At the end of this time the pain had disappeared entirely. After several months a slight pain recurred at the occiput, which was entirely and permanently relieved by a single application.

CASE VIII.—A case of acute neuralgia of the supra-orbital branch of the fifth, of one day's standing, in an adult male. Made three applications, one to exit of nerve and two to the middle of forehead. Result, almost complete relief in a few minutes. Internal treatment by quinine and Fowler's solution. No recurrence.

Case IX.—A case of supra-orbital neuralgia in a female, æt. thirty-six, apparently dependent upon ovarian irritation, and existing for years. The remedy was applied at the exit of the nerve, giving partial relief. Repeated applications continued the improvement. Citrate of caffein was given internally, in grs. iii. doses every three hours, until three doses had been taken. Three days later the patient was almost entirely free of pain, this attack, she states, having been an unusually short one.

URETHROCELE,

WITH REPORT OF A CASE SUCCESSFULLY OPERATED UPON BY DR. T. G. THOMAS.

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It is not often that the gynecologist has opportunity to observe and record cases of this nature, and, hence, it may be looked upon as a pathological curiosity. Prolapse of the mucous membrane of the anterior wall of the vagina, with attendant prolapse of the bladder, is common enough. The same condition is not unfrequently extended to the urethro-vaginal septum, but neither of these is urethrocele, for here we have a dilatation involving more or less of the posterior urethral wall and the underlying urethro-vaginal tissue, a diverticulum urethræ, as Winckel calls it.

Dr. Thomas tells me he has seen only two cases of the kind.

Dr. H. J. Garrigues described to me one case in his practice in the summer of 1881. The treatment consisted of hot carbolized vaginal injections, and compression of the tumor. As to the final result, he was unable to speak, as the patient passed from his observation.

The only literature of the subject which I have been able to find is in Billroth's *Frauenkrankheiten*, Neunter Abschnitt, S. 37 u. 38, where Winckel reports four cases as all he has discovered upon record, respectively, those of Foucher, Gilette, G. Simon, and Priestley.

The case of Foucher (1857) was that of a woman twenty-seven years of age, who had suffered pain in micturition for four years, and had a small tumor three to four millimetres above the meatus urinarius. He operated similarly to Jobert in cystocele, incising the vaginal wall the entire length of the tumor, then removing a section one centimetre in width on both sides, and stitching the edges together. The result was satisfactory.

Gilette's patient was thirty-one years of age, the mother of three children; cured after the removal of a triangular section from the vaginal wall, and suture of the edges.

Simon's patient was forty-four years of age, the mother of eleven children, and a sufferer from incontinence of urine since the age of sixteen. For three years previous to her coming to Simon, the control of the urinary function was entirely lost, even while in the recumbent position. The tumor was almost of the size of an egg, and occupied the entire extent of the posterior urethral wall. The veins in the urethro-vaginal septum were much enlarged, and hæmorrhage was easily excited. He performed two operations, in which ten venous plexuses were cut, four requiring ligation, the wound being touched with chloride of iron. The improvement from contraction of the tumor was marked, and six months after operation urine was lost only when severe exertions, as in lifting, walking, etc., were made. Simon thought the improvement would not be permanent, and considered further dilatation and venous enlargement probable.

In Priestley's case the tumor was about half the size of an egg, and upon pressure pus and urine flowed from the mouth of the urethra. His treatment was compression by means of a Barnes' dilator introduced into the vagina, so preventing the sac from filling, and overcoming the difficulty.

The case of Dr. Thomas presented all the pathological features seen in those already referred to, and the excellent result testifies as to the propriety of the method of operation.

Mrs. C. A. V., colored; nativity, United States; residence, Long Branch, N. J.; age, forty-three; was admitted to the service of Dr. T. G. Thomas, in the Woman's Hospital, November 23, 1881. She has been married twenty-three years, has had three children, the last having been born sixteen years since, and no miscarriages. For the last five years she has suffered severe pains in the left side and leg, headache, difficult and painful micturition, the urine being dark, and very offensive in odor. Locomotion is difficult and fatiguing. Previous treatment has been medication only.

December 10.—The patient being under ether, in Sims' position, Sims' speculum was introduced, and a bluish-red tumor appeared, projecting into the vagina from the posterior urethral wall, its size being about that of an English walnut. The sound being passed into the urethra, its tip could be felt most readily by the forefinger of the left hand, placed against the tumor, thus proving the diagnosis. The urethra was either abnormally long or had been elongated in the development of the tumor. The latter was soft and elastic in feel, and gave to the finger the sensation of a recent plastic exudation in loose tissue. It was symmetrically convex, about forty-five to fifty millimetres in diameter. Beginning at a point about fifteen millimetres from its anterior termination, and extending an equal distance posteriorly, an elliptical section of the urethro-vaginal septum was removed with curved scissors, including all the diseased portion of this tissue. A nearly circular section of the superjacent urethral mucous membrane was next removed, about two-thirds the length of the former, or, in other words, removing only the diseased tissue. The hæmorrhage from the latter, both arterial and venous, was most profuse. From twelve to fifteen points required ligation. The edges of the urethral wound were brought together with three silk sutures; those of the vagina with eleven silver ones. The bladder was then washed out with a hot, weakly carbolized solution, and a flexible rubber catheter introduced. The knees were then tied, and the patient placed in bed upon her back. No hæmorrhage of any consequence followed, the bowels were constipated for a week, and the occasionally severe pain controlled

by hypodermic injections of morphia. The urine drained into a cup, kept in the bed under the catheter. The portion of vaginal mucous membrane removed presented, as already stated, a bluish-red appearance, thin and nearly smooth. The urethral portion was dark red in color, with an ulcerated patch in its centre about the size of a three-cent piece.

December 19.—Sutures removed. The parts are nearly healed, and no urine escapes. There has been some sloughing in the vaginal wound.

December 21.—Catheter removed. The patient passes urine without pain, and the organ seems to be restored to its natural condition.

January 5, 1882.—The patient has gained strength quite slowly, and required considerable stimulation. She is now able to walk about the ward, the wound is entirely healed, and she was this day discharged cured.

As will be seen, the operation was different from that practised in either of the four cases reported by Winckel, though most resembling Foucher's. It seems like a waste of time to resort to compression in a condition of this nature, for it must be continued a long time, and then does not promise a permanent cure.

The radical operation is best suited to the interests of the patient, and in the end must be more satisfactory to the surgeon.

A CASE OF REPEATED EXTRA-UTERINE PREGNANCY CURED BY GALVANISM.

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In the *Ohio Medical and Surgical Journal* for October, 1877, I reported, in connection with Prof. Starling Loving, a case of extra-uterine pregnancy cured by galvanism. The tumor, as therein set forth, was scarcely to be felt after a few months, and within a year no trace of it could be discovered. Menstruation began April 16, 1877, and continued with complete regularity until October 4, 1881, during which period she enjoyed robust health, with the exception of a few transient ailments. On the latter date, four and a half years after the former pregnancy, the menstrual flow appeared for one day, and was scanty and of ill odor. By the end of October, she suffered somewhat from nausea, and believed herself pregnant. On November 9 she began to have quite severe attacks of pain, accompanied by tenesmus, and referred to the rectum and lower part of the abdomen. They were at first short in duration, and easily relieved by enemata and moderate doses of anodynes, and occurred only once a day, or even every other day, so that quinia was given, but without effect. Digital examination at this date showed the womb to be somewhat enlarged, and there was a sensation of fulness in Douglas's cul-de-sac. Little change occurred until December 1, when Dr. Loving and I made a more thorough exploration. We found the uterus enlarged, and pushed forwards by a cystic tumor in Douglas's cul-de-sac, now very plain. As there was still ground for supposing that a normal uterine pregnancy had led to a refilling of the old sac, or at least to some form of growth connected with it, we deemed it best to wait and watch. This did not take long, for on the morning of December 6, soon after rising, the patient was attacked by the typical and horrible pain of extra-uterine pregnancy. In five minutes she looked as if she had been sick for months; the features were pinched and extremities cold, with the whole surface bathed in a cold sweat. A thick lochial-like discharge was also observed, and the sound entered the empty uterus to the depth of four inches. The uterus reached nearly half way from pubes to umbilicus, and the tumor, indistinctly separable from it, was found in the left iliac region. Occasional contractions could be felt in the cyst, especially when the pain was severe. The womb and tumor alike seemed immovably wedged in the pelvis.

The pain was held in check by morphia and chloral until 1 P.M., when she was seen by Dr. A. Dunlap, who corroborated the diagnosis. At 3 P.M. the first application of the battery was made, using a Fleming one-celled battery (No. 2), the induced current, poles in 5 and 7, and the coil gradually about one-half uncovered. The application was made for ten minutes, after which she was much easier, though any attempt to take food induced vomiting. The contractions and pain were much less, but continued at intervals until the next application of the battery. This was repeated on December 7, 8, 9, 11, and 14, a strong current being used for ten or twenty minutes, except in the last application, when the current was maintained for fifty-three minutes, the coil being gradually entirely uncovered, so that the action was very intense during the last few minutes. No contractions were observed after the 14th, nor any pain, except when having a passage from the bowels, which was rendered difficult by the mechanical pressure of the tumor upon the rectum. The lochial-like flow which began on the 6th ceased entirely by the 13th, during which time the decidual lining of the womb came away, mainly in two large pieces, with many smaller flakes. Whether due to the disturbing influence of the battery or not, a considerable amount of reflex disturbance continued, mainly vomiting, and her convalescence seemed rather longer than during the former experience, and it was nearly a month before she could get about again. Menstruation returned normally on January 31, and at the last examination, on February 24, the tumor had considerably diminished in size, the patient appearing in excellent health, and with no complaints as to the local condition.

This adds another, the thirteenth at least, to the already very respectable list of cures of this accident by galvanism. When so formidable a condition as this can be certainly cured by so attainable a remedy, a degree of criminality attaches to the use of any other method, provided the diagnosis can be made early.

Another point of interest in this case is, that it was a repetition of the accident. Of the cases collected by Parry, in which a woman suffered twice from extra-uterine pregnancy, only about half a

dozen are beyond dispute. The only one given in detail is that of Dr. Haydon, in which, singularly enough, the interval between the pregnancies was the same as in this case, and both cysts were upon the same side. A fact relating to causation, which was not noted in the account of the former pregnancy, may be here mentioned. In a former labor (1872) there was a laceration of the cervix upon the left side, extending into the vaginal mucous membrane. This healed entirely, but left a cicatricial band which tends to draw the cervix somewhat to the left. Perhaps the consequent tilting of the fundus uteri to the right may have so altered the relations of the parts concerned as to make the journey of the ovum to the oviduct difficult, and have thus twice led to the occurrence of the accident.

HOSPITAL NOTES.

NOTES ON THE TREATMENT OF FRACTURES IN THE BOSTON HOSPITALS.

Fractures of the Femur.—In the principal hospitals in Boston, some form of Buck's extension, with weight and pulley, or of Desault's apparatus, is used in the treatment of a great majority of fractures of the femur. The modifications are, however, numerous, to suit special cases. All fractures of the femur are put up under ether, whatever the form of dressing applied.

At the Massachusetts General Hospital fractures of the neck of the femur are generally treated by Crosbie's modification of Buck's extension, the extension strips of adhesive plaster reaching from the ankle to the middle of the thigh, secured by three or more circular straps, and a bandage then applied from the toes to the upper part of the thigh. A coat of starch is applied over all to prevent the bandage from slipping. Extension is made by weight and pulley, and counter-extension by the weight of the body, the foot of the bed being raised.

Numerous devices are employed to overcome the tendency to eversion. One of the most common of these is to attach one or more broad strips of bandage to the inside of the leg, carrying them under the calf, and bringing them up on the outside, attaching them to the top bar of the "cradle" used to protect the limb from the pressure of the bed-clothes. The limb is thus hung in a sling, and its weight causes it to rotate inwards. Sand-bags are also sometimes used for the same purpose, but, as they are easily displaced by slight movements of the patient, they are little employed alone.

At the City Hospital, Crosbie's extension, with a long T splint, is generally used in these cases. The splint, which is securely fastened to the limb, reaches from the axilla to below the foot, where the long cross-piece is attached, thus preventing any rotation of the limb.

In case of failing strength or the appearance of typhoidal symptoms in aged patients with impacted fracture of the neck, some simple apparatus, such as a stiff canvas shaped like a spica of the thigh, and buckled in place, is applied, and the patient allowed to get out of bed if possible—the general condition, and not the fracture, calling for treatment.

Fractures through the trochanter are treated by Crosbie's extension, with the addition of a long external splint and the abdominal belt, or a long T splint.

In fractures of the upper third, Crosbie's apparatus, as above, or Flagg's modification of Desault's long splint, is used. The latter is applied as follows: Extension strips of adhesive plaster are applied as in Buck's extension; on the outside of the limb is a long, straight splint, reaching from below the foot to a pocket in a broad abdominal belt; on the inside a similar splint reaching nearly to the perineum. These splints are rolled in a sheet in such a manner as to make a trough in which the limb rests, and are secured by several circular straps. The side-splints slide through two slits in a cross-bar, which may be secured at any distance below the foot by means of pins, and extension is made by a wooden screw working in this cross-bar, and to which the extension strips are attached. Perineal bands attached to the abdominal belt give the required counter-extension. Figured in *Hamilton*, p. 449.

In fractures of the upper third, where there is tilting of the upper fragment, the double-inclined plane is sometimes used. The deformity is also overcome by carrying the foot upwards and outwards.

In fractures of the middle and lower thirds, Crosbie's extension, with or without a long ham-splint, is generally used. The external T splint and the double-inclined plane are also applied. Coaptation splints are always used, unless the fracture is very near the extremities of the bone.

In children simple fracture of the femur is more often treated by double T splint than by any other method.

Plaster and other stiff bandages are almost never used as a primary dressing. Even late in the treatment there is so much danger of bowing and shortening, that dextrine, or glue and starch bandages, so much used in fracture of the leg, are seldom applied to the thigh.

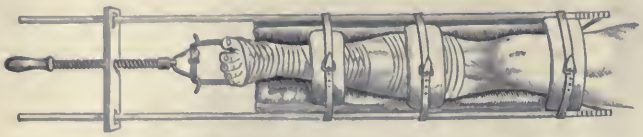
Compound fractures are dressed either according to Lister, or with some modified antiseptic dressing, or constant irrigation with carbolic solution is employed. Crosbie's extension, long "Desault splint," or Smith's anterior wire splint are applied over the dressing. Smith's anterior splint is especially used at the City Hospital in cases complicated by delirium tremens.

Fractures of the Leg.—In simple cases, where there is little tendency to displacement, a pillow folded about the leg and supported by straight pieces of splint-wood, the old fracture-box, or Day's carved side-splints, are generally used. The fracture-box is especially used for fracture near the ankle, and the carved side-splint, with the patient on the side, and leg flexed, is often useful in case of riding of the lower fragment in fractures of the middle third.

At the Massachusetts General Hospital a splint called the "short Desault" is very often used in fractures of the middle third, where there is tendency to displacement. It is applied as follows: Extension strips are applied in the usual manner from the ankle to a point a short distance below the fracture, and similar strips are applied from above the point of fracture to the knee, free ends a foot long being left above the knee. Two straight splints, about three and one-half inches wide by three and one-half feet long, are placed on each side of the leg, and to their upper ends the counter-extension strips are firmly fastened, about six inches above the knee. Below the foot is a cross-bar and screw, as in the "long Desault" already described. It will be seen that on tightening the screw, extension and counter-extension will be made, and the fragments drawn asunder. Between the side splints and the leg, folded sheets and towels may be placed to protect the leg, and to correct any lateral displacement. The whole apparatus is firmly held together by straps and buckles. Under these straps folded compresses or towels may be so arranged as to prevent any overriding. Beneath the leg, and reaching from the heel to the middle of the thigh, are one or two folded sheets, which are included in the straps.

The accompanying cut shows the splint applied. The fracture is in the middle of the leg, between the

bandages. The extension strips reach from the top of the lower bandage to the spreader attached to the screw, and the counter-extension from the lower edge of the upper bandage to the top of the splints, where they are fastened.



For Pott's fracture Pott's outside-splint is very generally used.

When the fracture is moderately firm, a stiff bandage of plaster, dextrine, silicate of potash, or starch and glue is applied. A light plaster, covered with a layer of dextrine bandage, is a very convenient form of dressing.

Compound fractures of the leg are dressed antiseptically; when necessary, loose fragments removed, and the extremities wired, and any of the above-mentioned splints applied. At the City Hospital a plaster tray, made of plaster rubbed into several thickness of gauze, and moulded to fit the limb, is frequently employed. A fracture-box, with sides in sections, is also used.

At the Massachusetts General Hospital a railroad fracture-box has been used for many years, and is very useful where there is tendency to overriding. This is a simple fracture-box on rollers, which run on a suitable railroad. Extension can be applied to the box by means of weight and pulley.

In case the heel becomes chafed or tender, it is raised by means of gauze strips or combed flax attached to the sole of the foot by collodion, and tied to the cradle over the limb, or to a special bow attached to the fracture-box or other apparatus employed.

Fracture of the Forearm, when near the elbow, is treated with the internal angular splint, except fracture of the olecranon, which is treated in the usual manner by extension on a straight splint.

In the middle third, anterior and posterior splints, generally the spoon-shaped carved splints, are applied. For those near the wrist (Colles' fracture, etc.), quite a number of splints have been devised, but those now most used are the anterior and posterior carved, Drs. Bolles' and Bond's.

MEDICAL PROGRESS.

PULMONARY CAVITIES.—In the first Gulstonian lecture on the above subject, Dr. WM. EWART alludes to the following as the chief features of the walls of cavities:

1. Absence of protecting epithelium.
2. Gradual decay within, leading to the formation of a necrotic layer (pseudo-pyogenic).
3. Gradual fibroid growth from without, constituting the so-called capsule.

From the standpoint of anatomical description, he proposes, side by side with this useful division, the following classification of cavities:

1. Cavities devoid of limiting membrane: in these excavation takes place by a crumbling in the dry variety, by a liquefaction in the moist variety. The usual type is the moist. Reaction is at a minimum, and disintegration often overtakes the fibroid zone before it has become a protection to the tissue. *Special subvarieties: a.* Suppurative necrotic form, commonly present in acute phthisis, where it is apt to occasion pneumothorax; *b.* Simple liquefaction, apparently from soakage, most frequently witnessed in compressed devitalized tissues when attacked by œdema; *c.* Ichorous ulceration, observed in the rigid and sinuous burrowings of indurative chronic pneumonia.
2. Cavities possessing a distinct capsule in the midst of spongy lung-tissue: excavation is due to limited caseous abscesses, frequently also to the softening of hæmorrhagic foci.
3. Chronic cavities with thick lining, continuous, with more or less induration, partly inflammatory, but chiefly due to collapse.
4. Chronic cavities with thick lining, surrounded by a rim of tubercle.—*British Med. Journ.*, March 11, 1882.

THE ACTION OF CALOMEL ON FERMENTATION AND ON THE LIFE OF MICRO-ORGANISMS.—A paper with this heading appears in the last number of Hoppe-Seyler's *Zeitschrift für Physiologische Chemie*, by N. P. WASSILIEFF, who, after noting the high estimation in which calomel has been always held in disordered conditions of the bowels, especially in children, points out the absence of any experiments to show or explain the cause of its influence, with one or two exceptions. Voit, indeed, as long ago as 1857, observed that albumen and blood mingled with calomel were capable of being kept for days without any indication of putrefaction, and Hoppe-Seyler made some similar observations; but besides these, few, if any, researches have been made on its action. In M. Wassilieff's experiments, calomel was added to the fluid obtained by acting on albumen with gastric juice, and to that obtained by acting on albumen with pancreatic juice: and he satisfied himself that the albumen-digesting ferment of both these fluids was not damaged by calomel—peptones in the one instance, and leucin and tyrosin in the other, appearing as usual—but that the presence of this substance prevented the formation of the secondary products, such as indol and phenol. Neither hydrogen nor hydrogen sulphide formed in the fluids containing calomel, whilst they were abundantly produced in the others. In like manner, the author experimented on the effects of calomel on the fat-digesting and the amylolytic ferments of the pancreas, and found that it had no modifying influence upon them, but that it arrested the changes which followed their completion, entirely preventing, for example, the butyric acid fermentation and putrefactive processes. He hence arrives at the conclusion that calomel acts differently on the formed or organized and the unformed or unorganized ferments, permitting the action of the former to proceed unchecked, but completely preventing the action of the latter.—*Lancet*, March 4, 1882.

ANOTHER DEATH UNDER CHLOROFORM.—Notice has been forwarded to the coroner for Central Middlesex of the sudden death of a gentleman from Manchester, who died at the Surgical Home, Fitzroy-square, on the 22d ult. It appears that the patient came to London on February 20, having previously consulted Mr. Lister, for the purpose of undergoing an operation in respect of a lumbar abscess, from which he had been suffering. The deceased was about to be operated upon by Mr. Lister, and was being placed under the influence of chloroform by Mr. Watson Cheyne, when he suddenly expired from its effects, although every effort was made to resuscitate life. The deceased gentleman is stated to have been twenty-seven years of age. A certificate of the cause of death, stating, primarily, "chronic abscess of the abdomen," secondarily, "the effects of chloroform," was taken to the district registrar, who declined to register and communicated with the coroner. In the meantime, however, the body having been removed to Manchester, the necessary information has been forwarded to the coroner for that city. A *post-mortem* examination showed that the heart of the deceased was quite healthy.—*Lancet*, March 4, 1882.

Strychnia.—M. Delaunay has found that if one limb of a frog is faradized for half an hour, and the animal is then poisoned with strychnia, the convulsions appear sooner in this limb than in the others. The effect is not observed if the current passes for five minutes or for an hour, probably because in the former case its influence is insufficient, and in the latter case is too great and exhausts the nerves. If the same dose of strychnia is given to each of two frogs, and one is suspended by the head and the other by the feet, the latter is seized with convulsions twenty minutes before the former. The depending position of the head seems to render the effect of the strychnia more rapid and more intense. The practical inference is drawn from this that it is unwise to allow persons who are poisoned with strychnia to lie down; they should be kept up by mechanical means. The effect of strychnia on sensibility was found to be manifested sooner by a small than by a large frog, on the left side sooner than on the right, and in the fore limbs sooner than in the hind limbs. Richet has shown that a large dose of strychnia kills without causing convulsions. If a frog thus poisoned is bled, the tonic spasms occur which characterize the ordinary form of poisoning.—*Lancet*, Feb. 25, 1882.

Action of Iodoform.—The following is a summary of the actions of this drug, as determined by Högyes from a series of very complete experimental investigations:

1. Iodoform, in suitable doses for dogs, cats, and rabbits, is a poison, and causes, in a few days, emaciation, with slow death, without convulsions. It is both a heart and respiratory poison.

2. Fatty degeneration of the liver, kidneys, heart, and voluntary muscles is found after death.

3. In cats and dogs it induces sleep, but not in rabbits; reflex action is not diminished during the deepest narcosis.

4. If applied in an undissolved condition to the skin, or under it, in the intestinal canal or to serous membranes, it dissolves in the fats of the part and free iodine is liberated, which unites with the albumen, and as such it is absorbed.

5. A similar formation of the albuminate of iodine takes place when iodoform is injected as an oil solution under the skin or into the serous cavities.—*Canada Med. and Surg. Journ.*, March, 1882.

Functional Disturbances of Single Cavities of the Heart.—Lukjanow, at the suggestion of Prof. Botkin, of St. Petersburg, has undertaken (*Centralb. für die Med. Wiss.*, 1881, No. 49) a series of experiments on dogs and rabbits, to determine whether the harmonious working of the heart as a whole may be prevented by occlusion or ligature of the coronary arteries, by stoppage of the respiration, or by occlusion of the aorta or pulmonary artery. He summarizes the results as follows: 1. The occlusion of one coronary artery affects first the side supplied by it, then the other side, and primarily influences the auricle. 2. Occlusion by clamping causes changes in the number and character of the contractions; the ligature differs only in producing the effect sooner. 3. Changes in the number and character do not always proceed equally. 4. Inequality in the contractions of the auricles is produced much more easily than of the ventricles. 5. The contractions of the auricles and ventricles may easily be made to be unequal in number; also the two auricles may be readily made to contract at different rates, but it is much more difficult to obtain this result with the ventricles. 6. Between the regular cardiac contractions and the irregular oscillation of muscular fibres, there is an intermediate stage of peristalsis which may run through the heart quite regularly; the heart's muscle is capable of peristalsis and antiperistalsis. 7. While the auricle is contracting regularly, but the ventricle, in consequence of occlusion of a coronary artery, shows only peristaltic movements, irritation of the peripheral end of the vagus affects the movements of the auricle, but not those of the ventricle. 8. The secondary frog's thigh contractions, which in a normal heart are manifested by all its cavities, are enfeebled by clamping a coronary artery, chiefly on the side supplied by it; most frequently secondary contractions are not obtained under these circumstances, an explanation of which is not afforded either by alterations in the number and energy of the heart's contractions, or by changes in the frog's thigh. 9. At a certain stage of the clamping of the left coronary artery, the left auricle shows marked congestive phenomena. 10. The alterations produced by occluding a coronary artery may disappear completely on the clamp being removed, with restoration of the heart's function. 11. The conus arteriosus, as regards its function, is in certain degrees independent. 12. Sudden asphyxia affects sometimes most the right heart, sometimes the left; but the phenomena are not the same as those produced by occlusion of the coronaries; amongst other things, there is no decided tendency to peristalsis, and a less rapid influence on the secondary contractions. 13. The influence of coronary occlusion appears to be very probably attributed to two principal factors; first, to the more or less sudden and complete ischæmia; second, to the retention in the heart of the waste products produced by its continued contraction for some time after the occlusion.—*London Med. Record*, Feb., 1882.

Neuralgia in Diabetes Mellitus.—Dr. Thomas Buzzard calls attention to the fact, first prominently brought forward by Dr. Jules Worms, of Paris, that a form of neuralgia is apt to occur in the course of diabetes mellitus, characterized by its attacking symmetrically the two sides of the body, as well as by its unusual severity; and also to his personal observation, that two attacks of this kind, which had failed to be influenced at all by morphia, yielded with remarkable rapidity to the employment of salicylate of soda.—*Lancet*, Feb. 25, 1882.

Excision of the Cancerous Uterus.—Statistics as to operations, compiled from the practice of many different persons, represent, not the possible results, but what may be called the average result only, because they include operations done by men of very different knowledge, skill, and experience. They tell us what has been done, but we cannot judge from them what may be done, nor always what ought to be done. The results obtained by one surgeon of experience are of much greater value for the guidance of others. Prof. Schroeder, of Berlin, has recently published in the *Zeitschrift für Geburtshülfe und Gynäkologie* the results obtained by him from the partial and complete excision of the cancerous uterus. The first group of cases which he gives comprises those of *removal of the body of the uterus*, the cervix being left. He has done this five times—three times for carcinoma, twice for sarcoma. Four recovered, one died from septicæmia. In one, a case of carcinoma, four months after the operation there was no sign of relapse. In another, a case of sarcoma, five months after the operation, the disease had recurred. The subsequent history of the other two is not given. The next group is of cases of *Freund's operation*, of which Dr. Schroeder gives eight cases, six of which were operated on by himself, one by Dr. Veit, and one by Prof. Freund. Of the eight, three recovered, five died. Of the three recoveries, one had relapsed eleven months afterwards, one died six months after-

wards from recurrence of the disease; the other, fourteen months after the operation, was as yet without relapse. Dr. Schroeder then gives his experience of the *supravaginal excision of the whole cervix; i. e.*, dissecting off upwards the mucous membrane, connective tissue, and peritoneum, and then cutting through the cervix high up. Of this proceeding he gives thirty-seven cases, with four deaths. In one, the disease was not completely removed. Of the remaining thirty-two cases, successful so far as recovery from the operation was concerned, in fourteen recurrence took place; in three within two months; in three within three months; in three within six months; in three others within seven, eight, and nine months, respectively; in the other two the date of recurrence is not given. Seven are reported as continuing well, having been watched; in two cases two months only; in the remaining five cases, three, four, five, six, and seven months, respectively. The subsequent course of the remaining eleven cases is not stated. The last operation for uterine cancer of which the results are given is the *total extirpation of the uterus through the vagina*. This Prof. Schroeder has performed eight times, with only one death, which took place from internal hæmorrhage, the result of a laceration of the broad ligament. The successful cases were, at the time Prof. Schroeder wrote, too recent for him to make any statement as to the frequency of relapse. So far as these statistics go, the latter operation would seem the most promising. But it is one difficult of performance, in which immediate success must depend largely upon the manipulative dexterity and experience of the person who performs it; miscellaneous statistics cannot show what results may be obtained by an exceptionally skilful and careful operator.—*Med. Times and Gaz.*, March 11, 1882.

A CASE OF PYOSALPINX BURSTING INTO THE ABDOMINAL CAVITY.—Dr. H. BURNIER reports a case of right-sided purulent salpingitis with the termination just mentioned. (*Zeit. f. Geb. u. Gynäk.*, Bd. vi., Hft. 2.) A woman sixty-nine years of age, suffering from prolapsus uteri, died soon after admission to the hospital. In the right side of the pelvis a pus-cavity was found communicating with the right Fallopian tube. The portion of intestine attached was thinned at several points, and actually perforated at one. Burnier believed that the metritis and endometritis resulting from the prolapse had given rise to the purulent salpingitis. The free end of the tube was closed, and the consequent accumulation led to rupture. Eleven days before death the patient suffered from tolerably well-marked symptoms of peritonitis. It was probably at this time that the rupture took place.—*Canada Med. and Surg. Journ.*, March, 1882.

ALBUMINURIA IN HEALTH AND DISEASE.—Prof. SENATOR, in an able mongraph on this subject, brings out many points of interest and value. He states that the albuminoids may be found in the form of peptone in the exudations of pleurisy, pneumonia, and acute rheumatism, as well as in the urine both in health and disease. It is suggested that its appearance in the urine is owing to a ferment-action analogous to that of the digestive ferments, and it is significant that peptonuria most usually occurs in the "zymotic" diseases. There is also an intermediate product in the changing of albumen into peptone, viz., propeptone or hemi-albumose; and that also is found in the urine, not only in cases of osteomalacia, but also in other cases, of which Dr. Senator has seen seven during the last three or four years. Urine containing propeptone (and not serum-albumin and globulin) remains clear on boiling, but becomes cloudy or gives a precipitate on the addition of acetic acid and potassium ferrocyanide. But there are probably cases of "mixed albuminuria," in which both propeptone and the ordinary albumens (serum-albumen and globulin) occur together. The peculiarity of propeptone or hemi-albumose, that it is not coagulated by heat, is certainly the reason why so little has been known hitherto about propeptonuria. The usual method of testing for albumen (boiling, and then adding nitric or acetic acid) is inadequate for the detection of propeptone, even if the boiled urine be allowed to cool before the acid is added. The best quantitative test for albumen (precipitating every albuminoid body except peptone) is to acidulate the urine with acetic acid, and carefully add a concentrated solution of potassium ferrocyanide. The detection of peptone in the urine is not so easy; it may be present when no other form of albumen is found (according to the above tests), and it is said that metaphosphoric acid will throw it down.—*Med. Times and Gaz.*, Feb. 18, 1882.

SYPHILIS OF THE FINGER.—In the *Independent Practitioner*, for March, 1882, Dr. F. N. OTIS reports eight cases of syphilis occurring in physicians, originating in infection of the finger in vaginal examinations.

ERGOT IN DIABETES INSIPIDUS.—In the *Detroit Clinic*, for March 15, 1882, Dr. W. N. CASE reports a case of diabetes insipidus occurring in a man sixty-six years of age, in which the fluid extract of ergot, in daily doses of from one-half to two drachms, was administered for eleven days, without producing any improvement, when the drug had to be discontinued on account of the unpleasant sensations attributed by the patient to its use.

THE ETIOLOGY AND PATHOLOGY OF DUPUYTREN'S CONTRACTION OF THE FINGERS.—Dr. W. W. KEEN (*Phila. Med. Times*, March 11, 1882), for the first time analyzes the heretofore recorded cases of such finger-contraction. He finds, as to the age of onset, that 37 of 44 cases occurred after thirty years of age; 106 males were attacked, to 20 females; 18 had manual occupations, to 54 non-manual; the right hand was attacked 59 times, the left, 49; the thumb was affected 9 times; the forefinger, 13; the middle finger, 45; the ring-finger, 88; the little finger, 87; and the ring and little fingers together, 65 times. In one-third of the cases it was hereditary, extending even to four generations; and 42 were gouty, to 6 who were not. He points out the impossibility of the palmar cords being the flexor tendon, because the sheath would resist such elevation of the tendons, because the attachment of the flexor tendons to the further phalanges should flex them before the first phalanx became flexed, which is not the case; and the cord is not always in the middle line of the finger, as it should be, were it the tendon. He attributes the cords not only to the fascia itself, but to the fibres running from it to the skin, and to the flexor sheaths, and to the fibres of Gendy, as the French call them, the strong, transverse band of fibres at the level of the web of the fingers. He describes also, as usual, two bands of the fascia running to the thumb, one of transverse fibres from the base of the forefinger, and one of longitudinal fibres from the fascia, and equivalent to a fifth digital tongue. This fascial connection is the cause of the not very rare thumb contractions.

The early writers all considered the disease traumatic in its origin, but, with many modern writers, he believes that while a few cases may possibly arise from injury, yet the vast majority are due to a gouty predisposition, or some similar constitutional vice, and gives strong reasons in support of this view. He points to the late age of onset; its appearance in women; the non-manual occupation of most of the patients; the invasion of the left hand, and of the less used ulnar fingers; the appearance of the deformity even at birth, and the ab-

sence of any inflammatory appearances, as strong and convincing arguments against its supposed traumatic origin. In a future paper, he will discuss the treatment of the deformity.

Cutaneous Myoma.—MM. Brigidi and Marcacci conclude from an elaborate statistical study of myoma of the skin:

1. Dermatomyoma, of eruptive forms, develop usually in middle age.

2. They are usually multiple, and occur particularly in the mammary region, in the arms and forearms, and on the upper part of the trunk.

3. They are ordinarily of small size, as large as the head of a pin; rarely as large as a cherry.

4. They appear as prominent, smooth, hard, rosy patches on the surface of the skin.

5. They usually cause acute subjective symptoms.

6. Their progress is slow, and not much modified by therapeutic measures, though Virchow reports improvement under the use of compresses moistened with chlorhydric ether.—*Ann. de Derm. et de Syphilog.*, Feb. 25, 1882.

Nephrectomy: Death from Uræmia.—Lücke (*Deutsche Zeit. f. Chirg.*, xv. S. 518) performed nephrectomy on a man aged sixty for carcinoma of the kidney, the patient dying four days after the operation. The autopsy showed primary carcinoma of the kidney, carcinomatous thrombosis of the renal vein, which was torn away in the operation, the rent being closed by a thrombus of the vena cava. The lateral branches of the vena cava were greatly dilated, but there was no hæmorrhage into the cavity formed in the operation. The left kidney was contracted, and the seat of cystic disease. The profuse bleeding which occurred from the torn vena cava during the operation was controlled by compression for a few minutes, and had no influence in producing a fatal termination. No peritonitis occurred in spite of the prolonged manipulation in the abdominal cavity, death following from the diseased condition of the remaining kidney.—*Centralb. f. d. Med. Wissen*, Feb. 4, 1882.

Treatment of Syphilis by Hypodermic Injection of Peptonate of Mercury.—Considerable attention has been drawn to this subject by the investigations of M. Martineau. The subject has been recently further studied by Dr. O. Gourgues, who draws the following conclusions from his results:

1. Peptonate of mercury is an unreliable preparation, is easily decomposed, and often causes considerable local disturbance.

2. The albuminate of mercury, prepared according to the following formula, is easily administered, and is not followed by any local inflammation: ℞. Bichloride of mercury, 1 gramme; distilled water, 20 grammes. Dissolve; then add 20 grammes of white of egg dissolved in 20 grammes of water; agitate the precipitate, and add 2 grammes of chloride of sodium dissolved in 60 grammes of water; agitate and filter, and add enough water to the filtrate to bring the weight up to 130 grammes. This solution contains 1 centigramme of albuminate of mercury in 1.30 grammes of solution; a dose suitable for hypodermic use.

3. Six to eight injections of 1 centigramme of this albuminate of mercury usually rapidly moderate the secondary symptoms of syphilis, and in three cases there was no return of the symptoms in four months.

4. Gastric and buccal disturbances have not been met with; in twenty-six cases there occurred no instance of stomatitis, and in only one case, that of a pregnant woman, was there any intestinal action.

5. By means of this method, topical applications are not required for such manifestations as mucous patches, papules, psoriasis, etc.—*Bull. Gén. de Thérapeutique*, Jan. 30, 1882.

Splenic Abscess Successfully Treated by Puncture and Drainage.—At the meeting of the Calcutta Medical Society, January 10, 1882, Dr. Wallace read the notes of this case. Dipo, a Hindoo female, about twenty-two years of age, suffering from loss of appetite, constant lassitude, and marked emaciation; she noticed also that her menses ceased to appear, so that it is now two years since their abeyance. A couple of months before her admission into hospital, she was troubled with diarrhœa, and occasionally the alvine discharge was largely intermixed with mucus and some blood.

On admission her condition was as follows: Emaciated, anæmic, and feeble looking; pulse small and regular; tongue clean, moist; abdomen somewhat enlarged, left hypochondrium especially; spleen found much increased in size, its margins easily traceable, and reaching to a point an inch to the right of the median line and down to the umbilicus, its lower edge coming as far as the anterior upper spine of the ileum; the organ was tender on pressure, but quite hard. There was no enlargement of the liver, nor could any pain or tenderness be elicited by palpation over any other part of the abdomen; the heart and lungs were healthy.

Subsequent Progress and Treatment.—For a whole month the patient's symptoms, though somewhat relieved, were materially unaltered. On the 23d the fulness and bulging were more decided, and over a circumscribed area of about two inches distinct fluctuation was felt, and the presence of fluid diagnosed. A fine exploring trocar was plunged into the swelling, at a point about an inch below the ninth left costal cartilage, giving exit to an ounce of thick, sanguinolent pus. The instrument was withdrawn, and a large-sized trocar was pushed into the abscess cavity, evacuating its contents, which measured quite eight ounces of similar pus. A stream of weak carbolized water was now injected into the cannula, through which, while it was still *in sitû*, a caoutchouc drainage-tube was passed into the abscess cavity, being made to retain its position by means of a probe, while the cannula was now removed without disturbing the tube. Boracic ointment and carbolized gauze dressing were applied. The operation was followed by complete relief from pain, the temperature became normal, and for the first two days the discharge of pus was so copious as to thoroughly soak the dressings, and any pressure on the tissues surrounding the drain caused a very free welling up of matter. On the tenth day the dressings were removed entirely, the temperature was again normal, and has remained appreciably so ever since. There is a visible improvement in the patient's general health, for, though she is still weakly and thin, yet she suffers no further pain; has had no fever for ten complete days; her bowels are regular, and the motions quite natural; she sleeps and eats well, and besides looking cheerful, is able to move about the wards very comfortably. The size of the spleen is still above normal, but the contraction it has so rapidly and steadily undergone is remarkable, considering its former dimensions. As the patient's health improves, there is little doubt that her menstrual functions will also be restored.

This case is of interest for its rarity, and perhaps also for its success and rapid recovery. Only a very few cases of simple acute splenic abscess are on record, and, though cases of acute and chronic inflammation of the spleen are constant enough in every one's practice, suppuration is an almost unlooked-for sequel to these changes. It will be observed that there is a history of dysentery in this case, but Dr. Wallace doubts if the

casual occurrence of such slight dysenteric symptoms which never assumed the chronic form had anything to do with suppuration in the spleen, though the frequent association and dependence of the latter upon the former in chronic dysentery and hepatic abscess is a matter that is accepted without any doubt. Incision and free drainage with antiseptic dressings and absolute rest, constitute seemingly the proper methods of dealing with such a case.—*Indian Med. Gaz.*, Feb. 1, 1882.

PERISTALTIC RESTLESSNESS OF THE STOMACH.—Prof. KUSSMAUL, by peristaltic restlessness, means the very marked wave-like movements of the whole stomach, which are only quieted when the stomach is completely empty of food. They are best observed in greatly-dilated stomachs with hypertrophied muscular walls, in cases of cicatricial contraction of the pylorus or duodenum. The excessive muscular action of the stomach is only an endeavor to overcome the mechanical obstruction. Sometimes it appears that similar movements may be neurotic, and not due to mechanical obstruction. He gives the case of an elderly nervous woman, in whom sorrow had caused diminished appetite, constipation, and slow wasting for two years and a half. Then, in consequence of the misuse of purgatives, she got dyspepsia. There were never any symptoms of ulceration. On examination there were observed a low and subvertical position of the stomach, moderate dilatation, and excessive peristaltic movements. In considering these three points, Kussmaul observes that with a pylorus at the normal height the deepest part of a stomach of normal size may descend below the umbilicus, and take the appearance of a loop of intestine. Such a depression of the stomach often leads to the incorrect diagnosis of dilatation when splashing, cooing, or slapping noises are present. These must not be confounded nor considered as of the same meaning. Splashing noises occur when water and air are shaken together by movements either of the whole body or of the stomach alone. Cooing and slapping noises are best produced when the stomach only contains air, and when the abdominal wall at the epigastrium is quickly protruded and retracted by the patient himself, or pressed in several times successively by the physician. Cooing and slapping noises do not justify diagnosis of dilatation of the stomach, and even when splashing noises occur below the umbilicus, dilatation can only be diagnosed when simple depression of the stomach can be excluded. The vertical position of the stomach, however, always disposes to dilatation. With regard to the entrance of bile into the stomach, the author observes that in washing out the empty stomach the water is often found to be tinged with bile. In other persons who also suffer from nervous or catarrhal dyspepsia without contraction of the pylorus or duodenum, bile is never found in the stomach in the morning. The reason why bile in some persons almost always passes into the stomach, is probably to be found in a difference in the formation and position of the pylorus and duodenum. The reason why bile passes more easily into the empty than into the full stomach is probably that in the empty stomach the circular muscular fibres of the pylorus are relaxed. When carbonic acid is generated by an effervescing powder in the empty stomach it passes very quickly into the intestines, provided there is no organic closure of the pylorus or duodenum. This incontinence of the pylorus is purely physiological. The author is unable to say whether the peristaltic restlessness in his patient continued during the night. Peristaltic movements of the stomach are abnormal when it is empty, and at no time should they be consciously perceived by healthy persons; whereas, in the case just mentioned, the feelings of movement and contraction were very disagreeable. Despite this restlessness there was constipation. The restlessness is especially marked in those cases of dilatation of the stomach where the vomited matters contain much acid. This fact suggests that the acid of the fluid contained in the stomach stimulates the peristaltic movements. Peristaltic restlessness is connected with conditions of the nervous system like those nervous tormina so frequent in hypochondriacal and hysterical patients.—*Volkmann's Sammlung Klinischer Vorträge*, No. 181, in *Praktischer Arzt.—Practitioner*, March, 1882.

SPOILED MAIZE AND PELLAGRA.—Dr. LOMBROZO has recently studied the causative relations between spoiled maize and pellagra, and the results of his experiments appear to confirm the prevailing opinion that pellagra results from the use of spoiled maize as food. The active agent is not, however, as previously supposed, the corn smut or sencillium glaucum, but an extractive principle existing in the spoiled corn itself, for which he proposes the name of pellagrozeine. As regards the treatment of pellagra, Dr. Lombrozo's experiments show that there is no specific remedy for the disease. He has seen good results follow the use of opium in cases where there is much mental excitement; quinia is valuable where there is prostration; and calomel, arnica, and cold douche in diarrhœa. He has also used arsenic in severe cases with improvement.—*Revue Scientifique*, Jan. 28, 1882.

TWO CASES OF HYDATIDS OF THE PERITONEUM SUCCESSFULLY TREATED BY ABDOMINAL SECTION.—Mr. LAWSON TAIT read a paper on this subject at the meeting of the Midland Medical Society, on Feb. 1. In the first case, the operation was incomplete, because the hydatid had so matted the intestines together that the larger number could not be removed. All the cysts which could be reached were broken down, and a drainage-tube was inserted in the pelvis from above. The patient's symptoms previous to the operation were very severe, but they rapidly disappeared. The patient completely recovered, and the hydatid masses had entirely gone when she left the hospital, on the twenty-fourth day after the operation. The second case was of a more simple kind, for the parasites were contained in a cyst in the lower abdomen, which was completly emptied and drained through the wound. The patient made an easy, rapid, and complete recovery.—*Med. Times and Gaz.*, March 11, 1882.

DRAINAGE OF THE PERITONEAL CAVITY.—KEHRER, of Heidelberg, discusses the various means for removing fluid from the peritoneal cavity after ovaritomy. He suggests capilliary drainage as the most effective. Some narrow pieces of carbolized cotton cloth are put into an India-rubber or Koeberle's drainage-tube, and the end brought so low down outside the body, although still within the antiseptic dressing, as to have somewhat of a syphon action. He details a case where this method was used with success and was found more effective than the ordinary methods.—*Centralb. für Gynäk.*, Jan. 21, 1882.—*Glasgow Med. Journ.*, March, 1882.

LAPAROTOMY FOR FIBRO-MYOMA OF THE UTERUS.—This operation was performed on Feburary 9, in the San Giovanni Hospital of Turin, by the Surgeon-in-Chief, Dr. F. MARGARY, under the antiseptic method. The tumor was a large one, and was removed, after ligation with two constrictors, by amputation near the internal os, as in the process of Porro. A second fluctuating mass remained in the utero-rectal pouch, which it was not thought prudent in the condition of the woman to remove. Unfortunately a hæmorrhagic, and probably septic, peritonitis caused the death of the woman on the fourth day.—*Gazzetta Degli Ospitali, di Milano*, Feb. 26, 1882.

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THE RELATIONS OF LOCOMOTOR ATAXIA AND SYPHILIS.

OF the many disputed points which, a quarter of a century ago, engaged the attention of the profession, but which the progress of medical science, and especially the increased frequency and exactitude of pathological research, have effectually disposed of or reconciled, none are of greater interest than those relating to that most distressing and intractable of maladies, locomotor ataxia. The differing or opposing views of Romberg, Remak, Spaeth, Duchenne, Landry, Trousseau, Benedikt, and others, have been gradually subjected to a process of critical analysis, by means of which much that was then doubtful or entirely false as regards the site and character of the essential lesion and the interpretation of the various symptoms has been rejected, the disease has become capable of accurate definition and classification, and its recognition by the general practitioner in one of its several stages is now a matter of daily occurrence.

With its symptoms and pathology, therefore, we need not long delay. The constant presence, as the specific lesion of the malady, of a hyperplasia of the neuroglia of the posterior columns of the spinal cord, followed by atrophy and degeneration of the nerve elements or, in other words, of spinal sclerosis, most marked below, but often advancing gradually until the brain is reached, is now universally admitted. The symptoms, first of irritation of the posterior or sensory spinal nerves, the fatigue after moderate exertion, rheumatic or neuralgic pains, abnormal sexual impulses, vesical irritability, cutaneous hyperæsthesia, etc., followed by those of temporary or permanent paralyses of sensation, absence of the patellar reflex, anæsthesia of the skin, impotence, incontinence of urine, amaurosis and deafness, and finally by the characteristic loss of muscular coordination without paralysis, the staggering, uncertain gait, the inability to maintain equilibrium, the dependence upon the sense of sight for recognition of position, all these are, as has been said, well-recognized evidences of the disease. Their association with and relation to the sclerotic condition are also so unmistakable in the light of our present knowledge of the physiology of the cord that they require no comment.

As regards etiology, prognosis, and treatment, however, the questions of supreme practical importance, it cannot be said that equal advances have been made or that the same unanimity of opinion exists.

Aitken, Niemeyer, Wunderlich, Trousseau, Bartholow, Flint, Roberts, and many other medical writers coincide in the opinion that treatment has been unsatisfactory, and although advocating certain therapeutic measures, do not heartily endorse them or claim to have obtained satisfactory results in any large number of cases.

Faradization and galvanism, rest, the cold bath, flagellation, nitrate of silver, morphia, belladonna and turpentine, the bromides of sodium and potassium, phosphorus and the phosphides, chloride of barium, ergot, and sulphur baths, are among the remedies which have been thus employed with no uniform success.

The possible causes which may produce the sclerosis and to which it has been assigned, are very numerous, the principal being hereditary tendency, previous spinal shock, injury, or inflammation, overexertion, rheumatism, gout, exposure to cold or wet, sexual excess, alcoholism, scrofula, and syphilis.

It may be said, however, that, with possibly one exception, no such definite association has yet been shown to exist between locomotor ataxia and any of these conditions as to furnish satisfactory reasons for considering them as usually related, or as to supply reliable indications for treatment.

The views taken by the distinguished authors above mentioned as to the probable cause and termination of any particular case are exceedingly grave and discouraging, but they nearly all agree in making an important exception in favor of ataxia of syphilitic origin, in which cases we are told that "we may hope for the best results."

This is, of course, what might be expected from the well-known amenability of syphilitic lesions to properly directed treatment, whenever such treatment is applied before actual destruction or disintegration of tissue has taken place.

It would thus seem that the point of chief importance in the future study of locomotor ataxia, that

which indeed overshadows all others in its practical value, is the relation of this disease to syphilis. In its non-specific varieties it is admitted by the majority of authors to be but little if at all benefited by treatment, while, on the other hand, those cases in which the association with syphilis has been so distinct as to lead to the employment of specific treatment have been found to do well.

If, therefore, it can be shown that in the *majority* of cases ataxia is of syphilitic origin, and that the spinal changes upon which it depends are due to previous syphilis, the influence of the application of these facts to prognosis and to treatment becomes evident.

Here, however, excellent authorities differ; Duchenne calls attention to syphilis as, in certain cases, the "only reasonable or apparent cause of the ataxia;" Schultze expresses himself in a similar manner; Vulpian states that it is "no exaggeration to say, that of twenty patients attacked with locomotor ataxia there are at least fifteen who are old syphilitic subjects." Erb observed antecedent syphilis in twenty-seven out of forty-four cases, sixty-seven per cent.; and Gowers believes that "syphilis must be regarded as the cause of locomotor ataxia in one-half of the cases of that disease." On the other hand, Westphal, Remak, Julliard, Bernhardt, and Broadbent have failed to observe so large a proportion of syphilitics among their ataxic patients, and to a greater or less extent reject this theory of the disease.

Authorities upon both sides might be multiplied, but we shall now only be able to allude to the views of M. Alfred Fournier which he has recently expressed at great length with his customary accuracy and clearness of observation and induction.

Having first reviewed the objections which are urged against the syphilitic origin of ataxia, and shown that the changes which take place in the cord are in no wise distinguishable from those produced elsewhere by syphilis; that the comparative inefficacy of specific treatment is due to its postponement until a period when irremediable tissue changes have occurred; that the association of the two diseases is so nearly invariable as to preclude the possibility of its being an accidental one, he having observed syphilis in 94 out of 103 cases of ataxia; and that, although the syphilitic forms of the malady have no absolutely distinctive symptoms, yet that the same is true of specific epilepsies, paraplegias, and other manifestations of nervous syphilis, he proceeds to state the following reasons for believing that the *great majority* of cases of locomotor ataxia are of distinctly syphilitic origin:

1. The significant frequency, already mentioned, with which the diseases are found to be associated.

2. The almost exclusive development of ataxia in the tertiary period of syphilis; out of 85 cases of ataxia observed in syphilitic subjects, in 81 the disease developed in the fourth year of the syphilis, in 3 in the third year, and in only 1 in the last month of the second year.

This extraordinary regularity in the date of its occurrence, is inexplicable on the theory that it is derived from some cause independent of syphilis, the association with the latter disease being merely an accidental one. If that were the case, it is difficult to conceive why it should not at least occasionally be met with in the secondary or primary stages.

On the other hand, its appearance at that epoch is conformable with the general system of evolution of syphilis, which does not, as a rule, produce its visceral complications for some years after the primary contamination.

3. The frequent similarity or identity of ataxic symptoms with those long known to be characteristic of syphilis, as, for example, paralysis of the cranial nerves, and even of the same pairs, the optic and oculo-motor; hemiplegias, epileptiform and aphasic attacks, etc.; progressive general paralysis, a not uncommon sequel of ataxia, is also a frequent and incontestable symptom of syphilis.

4. The beneficial influence exercised by specific treatment, which he claims to have used in many of his cases with the result of dissipating isolated symptoms, arresting or "immobilizing" the disease, and in some cases causing its complete and permanent disappearance.

5. The coincident development during the course of the ataxia of undoubted syphilitic symptoms, among which he mentions various ulcerative syphilides, gummata, exostoses, necroses, caries, etc.

6. The impossibility, in many cases, of finding any other imaginable cause for the production of the disease.

These statements of Fournier are, perhaps, not yet to be regarded as conclusive, but are worthy of thoughtful consideration, and if not refuted or overthrown by future investigations, will afford certain valuable guides to treatment, in regard to which the deductions to be drawn might be summarized as follows:

In every case of ataxia, careful and minute search should be made for evidences of antecedent syphilis, either acquired or inherited.

If this be found to have existed, the patient should be placed at once upon vigorous specific treatment, and should be directed to continue it through long periods.

If only a fair presumption of previous syphilis exist, the same treatment should be employed, as it would, at the most, be useless, not hurtful.

If the disease be recognized in its earliest stages, and found to be associated with syphilis, and treated

in this manner, a prognosis may safely be given of a more favorable character than at present seems justifiable in any other variety or under any other mode of treatment.

Finally, the best prophylactic treatment of locomotor ataxia would consist in the thorough and long-continued use of specifics during the different stages of syphilis, even in the absence of characteristic symptoms.

THE LAMSON CASE.

Cases of violent death, both homicidal and suicidal, have become alarmingly frequent within the last few years; and among these cases death by poison occupies a prominent position. Without bestowing particular notice upon the several important instances that have occurred in our own country, we would refer now more particularly to the recent English case—that of Dr. Lamson, which has excited so much attention both in Great Britain and the United States.

Unfortunately for the credit of the medical profession, the criminal is a graduate of one of our own medical schools, and was formerly an office pupil of a well-known practitioner of this city. He is, moreover, very respectably connected, his father being an Episcopal clergyman, residing at Florence, Italy.

The facts brought out in the course of this trial afford a good illustration of the prominent points connected with every toxicological case, although these may not always be as sharply defined as in the present instance.

The doctrine has not unfrequently been maintained that, unless the existence of the alleged poison can be positively established by chemical analysis, there is not sufficient proof of the crime; in other words, that the production of the suspected poison, in some form or other, through chemical reagents, is essential to prove the reality of the poisoning. This doctrine we hold to be both erroneous and dangerous; it is unsound in theory, as well as in practice. We need only remind the reader that there are a number of organic poisons which chemistry, with all its splendid advances, has not yet been able to identify—*aconitine* among the number. Various causes may interfere to prevent the most skilful analyst from detecting a poison after death, such as the loss of the substance by vomiting and purging, its possible decomposition in the body (if organic), its disappearance from the stomach by absorption, and its entire elimination from the system if death should be delayed for any length of time. How dangerous and unscientific, then, is the theory that would exclude from the list of fatal poisons those deadly substances of the vegetable and animal kingdoms, simply because of the unavoidable failure to detect them by chemical analysis! We hold, on the contrary, that when all the other links in the chain of evidence are perfect—such as the symptoms, the *post-mortem* lesions, the physiological tests and the moral proofs—then the chemical evidence is not required to establish "satisfactory proof" of the poison.

The correctness of this view is, we think, abundantly demonstrated by the circumstances of the Lamson case, in which there was no *chemical* proof whatever of the alleged poisoning, but where the guilt of the accused seems to be abundantly established by the other factors of the evidence, especially the physiological proofs and the proofs from circumstances. The former of these (the evidence from experiments on animals) is, in certain cases, of paramount importance. In the celebrated case of De la Pommerais, of Paris (1863), this, along with the moral proofs, constituted the main reliance of the prosecution in establishing the guilt of the prisoner. It will be remembered that *digitalin*, the agent employed, had only lately been discovered, and was but little known; but the identity of the results obtained by administering to dogs and rabbits the extract procured from the body of the deceased, with the effects of pure digitalin on the same animals, left no doubt of the actual identity of the two substances. So, in the Lamson case, the chain of evidence connecting the accused with the crime of aconitine poisoning seems to us to be sufficiently conclusive, although lacking the one link of the actual *chemical* demonstration, and for the reasons above given. First, we have the *motive*, powerful and pressing. The accused was in great pecuniary straits; he was bankrupt, in fact. He had assumed false titles, and qualifications and decorations. On the death of his victim (his brother-in-law) he would, through his wife, come into possession of some fifteen hundred pounds. Then the *opportunity* was most favorable. The poison was administered at different times under the guise of medicine and sugar. Furthermore, the *purchase* and actual *possession* of aconitine were clearly proven; and, on one occasion, a very close connection between the purchase of the poison and the administration of a powder, or pill, which occasioned symptoms of aconitine poisoning.

Among the effects of the deceased were found a number of *quinine* powders, sent to him by the accused, all containing aconitine—one of these over eight-tenths of a grain; and one-fiftieth of a grain of this powder killed a mouse in a few minutes.

But the physiological proofs are still more satisfactorily shown by the action of the extract procured by Stās' process from the vomit, which produced the characteristic tingling and benumbing feeling upon the lips and tongue of several persons who tasted it, and lasting over six hours, and which, when injected under the skin of a mouse, killed it

in a quarter of an hour. Dr. Stevenson considered that the vomit contained as much as a quarter of a grain of the poison. The liver, kidneys, spleen, contents of the stomach, and urine all yielded unequivocal evidence of the presence of aconitine, as shown from the peculiar effects upon the tongue and lips of the experimenters, and also from the fatal results on mice when injected hypodermically. The extract from the urine, when thus injected, destroyed a mouse in thirty minutes. In all the above experiments the results were verified by similar trials with specimens of pure aconitine.

Of course, the defence could not contradict such powerful proofs except by raising the extremely doubtful question of *cadaveric alkaloids* or *ptomaines*, as they are called, which have been alleged to be produced in the body after death. But so little is as yet known of these substances, if they exist at all, and so protean do they appear to be in their characters—simulating different vegetable alkaloids under different circumstances—that it really seems like the drowning man catching at a straw, to attempt to rebut the positive repeated physiological evidence of the presence of aconitine by such very uncertain and undemonstrated allegations.

We think that Dr. Stevenson and his colleague, Dr. Dupré, are to be congratulated on the skilful and scientific manner in which they conducted their examination of this most interesting case; and we may remark, in closing, that we can hardly suppose that the most rigid antivivisectionist would cavil at the propriety, not to say the absolute duty, of experimenting on the lower animals in order to arrive at the truth, in a case involving the life or death of a human being.

A NEW SIGN OF CONTUSION OF THE CORD.

Dr. Guinoiseau has observed a case of contusion affecting the inferior portion of the cervical cord in which there were notable modifications of the cardiac movements. After all other symptoms had subsided, it was observed that the rhythm of the pulse was singularly altered. On the 8th of October, when the first observation was made, the pulse was 49 whilst the patient was in the recumbent posture, 73 when he sat up, and 100 when he stood erect. On the 1st of November the pulse was 45, 51, and 77, according to position, and six months afterward it was 45, 62, and 88, respectively.

As Dr. Guinoiseau remarks, it has been known since the time of Gallois that the state of the spinal cord influenced the heart's movements. In 1863, Von Bezold demonstrated that after section of the cord between the occiput and atlas, excitation back of the section, quickened the beats. Cyon has also proved that there are sympathetic filaments going from the cord to the heart, excitation of which causes increased action of the heart. It has also been found that wounds and contusions of the cord in its upper part cause slowing of the pulse, and of the inferior part of the cord, a more rapid action. Whence Dr. Guinoiseau concludes that concussion of the inferior part of the cervical cord causes an irregularity of the cardiac rhythm, as observed in the case reported by him. Further observations, however, are necessary. One clinical case—the boundaries of the injury being indefinite—will not justify such positive deductions.

WHAT BYSTANDERS SHOULD DO IN CASES OF SUDDEN UNCONSCIOUSNESS.

To supplement the editorial in our last issue, entitled "Drunk or Dying," we lay before our readers, by request, some observations on what may be done by bystanders in cases of sudden unconsciousness.

A crowd should not be permitted to close around and exclude the air from the unconscious person. The cravat and all tight clothing about the chest and abdomen should be loosened. The head should be elevated a little and the neck kept straight to facilitate breathing. Are the pupils minutely contracted, the pulse very feeble, the rate of breathing slow, the skin cool, wet with sweat, and the face pale, the case may be one of opium poisoning and the indication is to keep up the breathing.

If the same general condition is produced by overexertion in the heat, the pupil dilated, the case is one of heat exhaustion, and a stimulant is needed.

If the surface is hot and dry, the breathing hurried and irregular, the pupil contracted, and the pulse rapid, this condition induced by great exertion in high temperature, the case is one of heat-stroke, sunstroke, or heat fever. Such an unconscious person should be removed to the shade at once, clothing removed, and the surface douched with cold water or rubbed with ice.

If the breathing is heavy, the pulse full and not rapid, the skin warm and perspiring, the face bloated, reddish or purplish, the eyes bloodshot, the pupils moderately dilated, and the breath that of a toper, the case is probably one of alcoholic intoxication. As in this condition apoplexy may occur, or pneumonia, or acute congestion of the lungs be induced, such subjects should be cared for by removal to a bed, by warm covering, and attention at the time of sobering.

If the breathing is deeply snoring, or stertorous, irregular, the pupils unequal and dilated, the eyes turned toward one side, the face rather flushed, the eyelids swollen, the lips puffing out at each expiration, and the surface at ordinary temperature, the case is probably one of hæmorrhage into the brain or apoplexy. Such a person should be moved as

gently as possible, the head should be kept elevated, the feet hanging down, and all obstructing clothing about the neck and abdomen should be removed..

It does not seem to be generally known that excellent results have been obtained recently from the application of powdered chlorate of potassium to epithelioma. The surface of the ulcer should be well cleansed, and finely powdered chlorate thickly dusted on it, and be allowed to remain until the next dressing. The application may be made twice a day, the surface being cleaned before reapplying the powder. This treatment is said to relieve the pain, to change the character of the morbid process, and promote healing. The same application may be used in chancre, chancroid, and in unhealthy ulcerations generally, and it has the merit of safety.

The subject of disinfection must always possess a present interest. As our knowledge of the nature and transformations of disease germs grows, their destruction becomes more and more an important element in prophylaxis. In the articles on this subject, completed in our present issue, the various agents employed in disinfection are discussed. Whilst the basis principles have not been overlooked, practical details have been fully set forth. With this information before him in a compact form, no physician need be at a loss how to deal with germs and decomposition products, whether flying in the air, or lurking in the mass of liquids and solids.

We are glad to see that Dr. Horace Y. Evans, the lately-elected President of the Philadelphia County Medical Society, is continuing the occasional simple receptions to the members. We have too little of this social life among us doctors, and the late President, Dr. Albert H. Smith, did a good service to the profession in inaugurating such reunions in the County Society—a custom which his successor does not mean to let die. The entertainment, we are very glad to see, is very inexpensive, and we should greatly regret to see its narrow limits insensibly enlarge, lest the Presidency of the Society should become at once an honor and a burden.

We find the following quotation in Harper's "Drawer," from an account of a recent funeral in Chicago: "The burial casket was made to conform, as far as possible, with the comfort the occupant was wont to surround himself with in the home he left." Mark Tapley himself, in his wildest endeavor to "come out strong" in adverse circumstances, could not exceed that, we are sure.

SPECIAL ARTICLE.

DISINFECTION.

II.

Of Solids and Liquids.

Aerial disinfection, although highly useful, does not accomplish the important results obtained from the action of disinfectants on solids and liquids. The complexity of the results renders any classification of disinfectants attacking putrescible matters, extremely difficult. It will serve our purpose, however, to group them in four classes:

1. Agents which change the form of the noxious substances.
2. Agents which combine with and fix in an unchangeable form the products of decomposition.
3. Agents having the power to arrest fermentative processes.
4. Oxidizing agents.

These forms or groups of disinfectants are not always clearly separable, and many of them act in several modes, but they are here grouped in accordance with their most distinctive properties.

1. *Fire* is the agent, above all others, to effect the destruction of noxious materials. Whenever circumstances will permit, this radical measure should be employed to destroy the contagium of variola, scarlatina, diphtheria, etc., which may be adherent to bedding and clothing. The materials to be burned should not be consumed in the open air, since the strong currents thus engendered may carry up the germs of disease, and deposit them at a distance unharmed, as has happened in some instances.

The *mineral acids* are also destructive agents. Sulphuric chars or carbonizes; nitric oxidizes and changes the fundamental structure; muriatic also burns and decomposes. They seize the water of organic matter, combine with any bases present, and coagulate albumen. All the lower forms of life are at once destroyed by them. It follows that they are effective agents, but difficult to handle. As they destroy the texture of clothing, carpets, bedding, etc., as well as the disease germs adherent to them, they cannot be employed in the sick-room or hospital ward. Acting on marble and the metals, and also staining and injuring woodwork, they cannot be used to disinfect water-closets. *Sulphuric acid* is, however, a cheap and effective disinfectant for organic matter not enclosed in vessels, and for common cesspools. Thus the walls and floor of a cellar may be well sprinkled with the common acid, and a layer of half an inch poured over the top of the contents of a privy vault.

2. Those agents which combine with the products of decomposition and fix them in an unchangeable form, are more important than the preceding. *Iodine* and *chlorine*, already referred to, belong in this group. Iodine, in solution in alcohol, is an effective agent for fixing the disease germs, and for deodorizing the stools of typhoid, dysentery, and the infectious maladies in general. A teaspoonful of the tincture will be a sufficient quantity for an ordinary evacuation. It is too expensive an agent, however, for ordinary purposes.

The *liquor sodæ chlorinatæ* of the U. S. Pharmacopœia, commonly known as Labarraque's solution, and consisting for the most part of hypochlorite of sodium, is an elegant disinfectant for use in the sick-room, but is also rather expensive. Undiluted, it may be used to disinfect vomited matters, sputa, stools, and urinary discharges, and can be employed in house closets, drains, etc. A tablespoonful to an alvine discharge, four to eight ounces at a time, and daily, for the water closet, are suitable proportions. Cloths moistened with the solution, and hung up, will give off chlorine for aerial purification. Much cheaper, and equally effective, is the well-known "*chloride of lime.*" This consists of quicklime, to which much chlorine adheres, of hypochlorite of lime, and of chloride of calcium. In the air it gives off chlorine slowly, and when an acid is added, abundantly. Dry chloride of lime may be freely scattered over cellar floors, and the walls washed with a solution (five pounds to a gallon of water). This solution can be utilized for the disinfection of stools, closets, etc., and for washing solid articles of furniture, the floors and walls of apartments which have been occupied by cases of contagious diseases.

The *chlorides*, *nitrates*, and *sulphates* are efficient members of this group. All the world knows of the preservative properties of common salt. The most powerful of the chlorides is *chloride of zinc*. This may be most cheaply prepared by dissolving commercial zinc in common muriatic acid, to saturation. One part of this solution to four parts of water, is sufficiently strong for most purposes. The official solution of the chloride of zinc (Liquor zinci chloridi, U. S. P.) contains 180 grains of the chloride to a fluid-ounce of water. Burnett's disinfecting fluid contains 200 grains to the ounce. This solution has long been celebrated for its power to destroy foul odors, and to arrest putrefactive changes in organic substances. It is, also, largely used as an injection for preserving anatomical material. Being free from odor, and also powerful as a deodorizer and a disinfectant, it possesses great advantages. If the official "liquor" is employed, a suitable proportion is four ounces to a gallon of water, for washing floors, furniture, and walls of an infected house. To disinfect stools, vomit, etc., a teaspoonful of the "liquor" will suffice for each, and a tablespoonful for an ordinary water-closet with contents. Other chlorides are combined with zinc chloride — for example, manganese, magnesia, iron, and sodium chlorides. As the zinc chloride is most powerful, no advantage is gained by the combination.

The *sulphates* used are, sulphate of iron (copperas), sulphate of copper (blue vitriol), and sulphate of zinc (white vitriol). Of these, unquestionably, the most useful is sulphate of iron, as it is also the cheapest. Common commercial copperas is the kind of sulphate of iron used for disinfecting and deodorizing. A saturated solution (about four pounds to a gallon of cold water) is used for close-stools, water-closets, etc., and the powder is most efficient for the privy, and for solid decomposing organic matter. A pint of the solution should be poured into the water-closet every two days, and the surface of the contents of a privy vault should be well covered with the powder, two or three times every week.

Sulphates of zinc and copper act in the same way as the iron salt, but are much more expensive. A solution, at one time very much used in France, and known as the *antimephitic water* of Larnaudès, consisted of a mixture of sulphate of zinc and sulphate of copper in solution—23 parts of zinc sulphate, and 2 parts of copper sulphate, and 975 parts of water. This solution, compared with a corresponding solution of sulphate of iron, was found to be more effective than the latter. Besides these salts, sulphate of alumina is used as a disinfectant, and for the preservation of anatomical material. It is inferior to the chloride of zinc, but compares favorably with the metallic sulphates. A saturated solution—two pounds to two quarts of water — will suffice for the usual disinfectant and deodorant applications.

The nitrate used for disinfectant purposes is *nitrate of lead.* In the proportion of one-fourth by weight, in solution, it constitutes the disinfectant liquid of Ledoyen. This preparation has proved to be very efficient as a deodorizer and disinfectant. Like the other members of the group, nitrate of lead combines with the changing and decomposing organic matters, arrests action of all kinds, destroys the germs, and decomposes the gaseous products of putrefaction. Like the chloride solutions, the nitrate of lead solution can be employed to rid the air of the gaseous and formed particles coming from a contagious disease, or from decomposing organic substances. A tablespoonful of the solution above mentioned will prove sufficient to deodorize an ordinary evacuation, and four ounces will usually suffice for the disinfection of a water-closet, but it must be repeated on alternate days. To disinfect the air of an apartment, cloths, moistened with the solution may be hung up at several points.

Considered from all points of view, of the various substances belonging to this group, common sulphate of iron must be regarded as the most useful for the disinfection of solids and liquids. It must be remembered, however, that its action does not persist longer than thirty-six to forty-eight hours, when the application must be repeated.

3. The third group, composed of agents having the power to arrest fermentative processes, includes many of those already considered. There are, however, several agents closely allied, having certain special properties, by reason of which they are classed together. This group, called *antiseptic*, contains carbolic acid, creosote, salicylic acid, boracic acid, benzoic acid, thymol, menthol, eucalyptol, resorcin, chinoline, etc. To these may be added certain essential oils—of gaultheria, cloves, peppermint, and thyme; and also alcohol, chloral, turpentine, etc. We can here consider only those available for disinfection.

Carbolic acid has occupied a very prominent place as a deodorizer and disinfectant, but its own diffusive and powerful odor is a strong objection to its employment. As the *impure carbolic acid* is equally as effective and much cheaper than the pure acid, it is now used preferably. For the disinfection of water-closets, privies, drains, and solid organic sub-

stances undergoing decomposition, the undiluted impure acid may be employed. For washing the walls and furniture of infected apartments, the solution used should not be less, certainly, than one per cent. The power of carbolic acid to destroy the germs of putrefaction, and possibly the germs of disease, is well established; but the strength of the solution effective for this purpose has not been definitely ascertained, although the minimum is, as above stated, not less than one per cent. There are serious objections to the use of concentrated solutions: the odor becomes almost insupportable; the vapor, continuously absorbed for some time, may induce slow poisoning.

The other agents belonging to this group possess considerable importance as antiseptics in the treatment of fever and other septic processes; but they are too expensive and are otherwise unavailable as disinfectants. It may be stated, however, that the essential oils above mentioned, dissolved in alcohol, may serve a useful purpose as deodorants and disinfectants. The alcoholic solution may be pulverized by an ordinary atomizer, such as are used for spraying perfumes, and the air of the apartment thus kept full of the minutely divided disinfectant oil. Such alcoholic solutions may be used to deodorize offensive discharges, when the more effective but disagreeable agents are repulsive.

4. The class of oxidizing agents contains a number of useful and active disinfectants. Finely pulverized *dry earth*, free from vegetable matter, has a very powerful effect. A layer, several inches in thickness, of earth on fecal matter will entirely destroy the odor, and in time deprive it of all fecal characteristics. Earth effects the oxidation of the gases retained in its interstices by adhesion. *Charcoal* acts similarly. The gases of putrefaction are absorbed by it, and slowly undergo oxidation. Liquids and soft solids are also acted on in the same way. Boxes of charcoal placed at the orifices of the sewers of London effectually deodorize, and to a considerable extent destroy the noxious constituents of sewer gas. Such materials are, however, not useful as true disinfectants. They may deodorize, but they do not destroy the *materies morbi*, the germs of diseases. Chlorine, iodine, and bromine, are held to be oxidizing disinfectants, because they seize the hydrogen of water and set free the oxygen as active oxygen. The bleaching and deodorizing property of chlorine is referred to the oxygen liberated in the active state, or as ozone. Enough has been said, however, in regard to the action of these substances.

A saturated solution of *bichromate of potassium* (1 part to 10 of water) is an active oxidizing disinfectant, but the action is brief. When added to decomposing organic matters, a part of the oxygen is given off and the salt is reduced to sesquioxide of chromium. Four ounces of the saturated solution should be used daily for the disinfection of a water-closet, and a corresponding quantity for the close-stool. It is, however, too expensive, relatively to the effectiveness, to be employed largely.

Permanganate of potassium is an elegant oxidizing disinfectant, but rather expensive. A solution in the proportion of a drachm to four ounces of distilled water is an efficient deodorizer and disinfectant of the sputa, urine, and stools of infectious cases. This solution pulverized by the spray douche, is an excellent means of aerial purification in the same class of cases; but it is too expensive to be used on a large scale, and, indeed, is less active than some other agents now available for disinfection of large masses of decomposing materials.

Summary.—It may be useful now to indicate the place occupied by the several substances employed as disinfectants, and the selection which should be made for special purposes.

For the air of the apartment occupied by the sick, iodine in substance, or the tincture, placed in some convenient situation and kept constantly in action; or cloths well moistened with the solution of chlorinated soda, or of chloride of lime in solution, or of chloride of zinc solution hung up in the apartment.

For the halls and rooms other than those actually occupied by the sick, for bedding and clothing which have been used by the sick, sulphurous acid, or chlorine disengaged from chloride of lime by action of an acid, or obtained in other ways.

For washing the solid articles of furniture, the walls, floors, etc., solution of zinc chloride, of sulphates, of carbolic acid, etc.

For the sputa, urine, and stools of contagious cases, iodine tincture, solution of zinc chloride, of carbolic acid, and of permanganate of potassa.

For sewers and privy vaults, sulphate of iron in powder.

REVIEWS.

The Detection of Color-Blindness and Imperfect Eyesight by the Methods of Dr. Snellen, Dr. Daal, and Professor Holmgren. Arranged for the Anthropometric Committee of the British Association for the Advancement of Science. By Charles Roberts. 8vo, pp. 16. London: David Bogue, 1881.

The Anthropometric Committee are quietly but most thoroughly doing a work, which, in time, and by very accretion, becomes more and more important. The labor already accomplished in the mere matter of measurements of the human body, and especially through the energetic efforts of Mr. Roberts, is enormous and extremely valuable, not only to the Anthropologist but to many others, ranging from the practical life insurance actuary to the aesthetic student of artistic proportion.

In the present excellent booklet of 16 pages they give simple but exact directions for testing the accuracy of vision and the color sense by non-experts, for the purpose of gathering together a large mass of material on which to base their conclusions. The text has nothing peculiar about it, unless it be its simple clearness; but the inside cover pages are both valuable and ingenious. On the cover page facing the title are six test types, a set of army test dots, and two barred letters for astigmatics. The third cover page is the most ingenious. It has let into it a sheet of leather with holes punched in it so that it resembles the cardboard used by ladies for worsted work. Into these are

sewed ten lines of colored worsteds with seven sets of color in each line. The idea is very simple, ingenious, and practical. Nothing better could be devised, especially for the purpose in view. It is quite worthy of being a "Yankee notion." The cover itself is both striking and useful, being in three horizontal boards of red, green, and violet.

LECTURES ON THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE CHEST, THROAT, AND NASAL CAVITIES. By E. FLETCHER INGALS, A.M., M.D., Lecturer on Diseases of the Chest and Physical Diagnosis, and on Laryngology in the Post-Graduate Course, Rush Medical College, etc. With 135 illustrations, pp. 437. New York: William Wood & Co., 1881.

Turning to the preface for the motive of the book, we find that "these lectures are designed to present a complete exposition of the subject of physical diagnosis so far as it relates to diseases of the chest, throat, and nasal passages; to give the essential symptoms of each disease; to point out the symptoms and signs which are of most value in a differential diagnosis; and to outline briefly the proper treatment for the various affections." Whilst, on the whole, the book is fairly well done, it is far from the completeness indicated in the outline sketched in the preface. The first eight lectures are occupied with the subject of physical diagnosis, in which we note many minor inaccuracies. The succeeding lectures are occupied with the various thoracic, cardiac, laryngeal, pharyngeal, and nasal diseases. There is a very good account of the instruments and methods of laryngoscopy and rhinoscopy. The definitions and symptomatology of diseases are generally quite insufficient, often inaccurate. Proper names are sometimes sadly mutilated: for example, Dr. Noel Gueneau for Dr. Noel Gueneau de Mussy. Authors are mentioned by name in the text, but there are no references to the publications. On page 86, mention is made of Fraentzel, Wintrich, Traube, Flint, and Da Costa, and yet there is not a single reference to the source of the opinions quoted. The same fact holds good throughout the whole work.

It must be said of the work that it is clear, and comprehensive. It may be a useful book to put in the hands of those commencing the study of these subjects, for although there are mistakes and inaccuracies, they are not of a very flagrant description. The mechanical execution of the work is tolerable. The illustrations are borrowed for the most part without acknowledgement, except the reference in the preface to the works of Cohen, Mackenzie, and Browne. The paper is coarse, the type worn but not indistinct, and the whole aspect cheap; but as this is one of the chief recommendations of this series, the effort must be regarded as successful.

A MANUAL OF DENTAL ANATOMY, HUMAN AND COMPARATIVE. By CHARLES S. TOMES, M.A., F.R.S., with 191 illustrations. *Second Edition*. 8vo, pp. 440. Philadelphia: Presley Blakiston, 1882.

The second edition of this manual has been revised and partially rewritten, and, although the arrangement remains substantially the same as before, some new matter will be found incorporated in the text. The enlarged type and increased number of illustrations add much to the appearance of the book, which, although compiled to a considerable extent from other sources, contains much original and valuable material.

CORRESPONDENCE.

APOMORPHIA IN CONVULSIONS OF CHILDREN.

To the Editor of THE MEDICAL NEWS:

I beg leave to report, in a condensed form, my treatment of three cases of general clonic convulsions in children, with hypodermic injection of apomorphia, and ask the opinion of others in regard to this treatment, who have had a larger clinical experience with the drug.

CASE I.—Male, æt. eighteen months, bottle-fed from birth, but previously as healthy as children so fed usually are, was seized suddenly one morning with general clonic convulsions, affecting, in turn, almost every muscle of the body. I arrived one-half hour afterwards, and found the child in a tub of hot mustard-water, which did not seem to give any relief. The face was livid, pulse too rapid and irregular to count, breathing very labored and insufficient on account of spasms of the respiratory muscles. Deglutition was impossible, and enemata were not retained. Chloroform inhaled gave relief while under the full influence of it, but the spasm returned as soon as anæsthesia became less profound. I then injected one-sixteenth grain of apomorphia dissolved in water. Getting but very little relief, in twenty minutes I injected another one-sixteenth grain. Relief followed shortly afterwards, and no symptoms of a return for seven days, but bromide of potassium was administered regularly, and when another convulsion was evidently coming on, a good dose of chloral was given. Symptoms of basilar meningitis soon developed, for which the child was treated, and he died at the end of eighteen days, evidently from exhaustion. Consciousness returned fully for two or three days after the first spasm ceased.

CASE II.—Male, æt. five years, was taken at 9 o'clock in the morning with severe general clonic convulsions, in all respects similar to Case I., save that the tongue was more severely bitten, and bled profusely. I saw him two hours afterwards, during which time the spasm had not ceased for a moment. Seeing that death would soon supervene unless relief was given, I at once injected one-eighth grain of apomorphia into the arm, and repeated it in thirty minutes. Relief speedily followed, consciousness returned in the course of the day, but an inclination to drowsiness continued for several weeks. Ordinary remittent fever set up, but the child was fully convalescent at the end of two months.

CASE III.—Male, æt. three years and six months, had been ill one week with light attack of pneumonia, was taken at midnight with general clonic convulsions, in all appearances the same as in the previous cases. Through a miscalculation in the hurry of the moment, I injected one-fourth grain of apomorphia into the arm. Very little relief following, I repeated the dose in thirty minutes, and soon the child was perfectly quiet and put to bed. As the case belonged to another physician, I had him called in the morning, and saw the case no more. I learned that consciousness returned the next morning, and the parents thought the patient better, but the child developed a slight meningitis, and died one week afterwards in a second convulsion.

One singularity of these cases was that there was no vomiting in either of them, and only slight nausea for awhile in Case II. Cases I. and II. were attacked shortly after eating a hearty breakfast. The question arose in my mind, is there a peculiar tolerance to apomorphia in cases of this nature? Authors tell us that one-sixteenth of a grain, hypodermically, is sufficient to produce emesis in the adult. Neither the pulse nor the respiration were affected in any great degree by the apomorphia. I would like to hear from others who

have had experience in this use of the drug. Is it justifiable or advisable to use it in such cases? Was there a possibility of the large doses setting up the meningitis? or was it only an apparent meningitis, and really the lingering effect of the drug? One thing certain, I shall never inject half a grain into another child's arm, unless I make a mistake, or find good authority to do so. But Bartholow tells us that death is produced by paralysis of the heart's action and arrest of respiration, so it is evident that it did not kill either of my patients in that way.

Quinia was administered in large doses in all the cases, together with other ordinary treatment used in meningitis. Very truly yours,

F. Jackman, M.D.

Indianapolis, Ind., March 20, 1882.

NEWS ITEMS.

BALTIMORE.

(*From our Special Correspondent.*)

The Meeting of the Medico-Chirurgical Faculty.—The eighty-fourth annual session of the Medical and Chirurgical Faculty of Maryland will be held at Baltimore, in Hopkins Hall of the Johns-Hopkins University, beginning Tuesday, April 11, at 12 M., and continuing about four days. The Faculty was incorporated in 1799, and for many years was the licensing board for practitioners. A decision of the Court of Appeals, however, deprived it of the right to control medical practice, since when the Faculty has taken the place of a State medical society. Of late years its sessions have been of constantly increasing influence and interest. The present session promises to be of especial importance. The proceedings will open with the address of the President, Prof. Frank Donaldson. It is understood that the question of higher medical education will form the subject of Prof. Donaldson's remarks. Reports of various officers, committees, and sections will follow. The annual oration is appointed for Thursday, 13, at 12 o'clock. The orator, Dr. A. M. Fauntleroy, late Superintendent of the State Insane Asylum, at Staunton, Va., has chosen as his subject, "Reciprocal Influence of Morbid Physical and Psychical Conditions on the Nervous System." The subject is one of absorbing interest, and the orator is well qualified to handle it. A number of interesting volunteered papers will be read, the subjects of which have not as yet been announced. A large attendance of members from the various counties is expected.

CINCINNATI.

(*From our Special Correspondent.*)

Medical College Commencements.—The colleges of this city have concluded their winter sessions, and held their commencement exercises. The past year has been an unusually successful one as regards the number of students and of graduates. The Medical College of Ohio added 104 to its alumni, the Miami Medical College 41, and the Cincinnati College 16.

It is understood that the last-mentioned institution has been conducted for some years at a considerable pecuniary sacrifice. The majority of the professors, not relishing an entire winter's work, with the privilege of paying dearly for it at the end, have resigned their positions. The longing for professional position is, however, so deeply rooted in the medical heart, that probably very little difficulty will be experienced in finding others ready to take the vacant chairs.

Afternoon Sessions.—The Cincinnati Medical Society has taken a new departure in fixing upon an afternoon hour for its future sessions. The attendance since this change was made has not justified the expectations of those who favored the plan, and it is believed that this action will soon be reconsidered.

Prize for Original Investigation.—At its last session the Academy of Medicine decided to offer, annually, a gold medal, or its equivalent, fifty dollars in money, to that member, who, during the year, should present to the Society a paper representing the most valuable original investigations. The award is to be made by a standing committee appointed especially for this purpose.

VIENNA.

(*From our Special Correspondent.*)

Electro-endoscopy.—Dr. Mikulicz, who has recently been engaged in œsophogoscopy and gastroscopy with the electro-endoscope, has petitioned the Minister of the Interior, through the Medical Faculty, for a special department in the Allgemeine Krankenhaus for these investigations. The petition has been graciously received, and, if granted, will make Vienna still more attractive to foreign students.

Sounding the Ureters of the Female Bladder, without Preparatory Operation.—Dr. Pawlick, Universitäts Docent, formerly an assistant of Dr. Carl Braun, read a paper, recently, in Salzburg, upon this subject. He found that when a woman was placed in the knee-elbow position, and the posterior vaginal wall was drawn upwards, compressing the rectum, by means of a Sim's speculum, the trigonum vesicæ and the entrance places of the ureters were plainly visible. It is then not difficult, with a specially designed catheter, to sound the ureters.

Dr. Pawlick demonstrated his proposition upon two women, whom he brought with him. He was able, in both cases, in a short time, to sound the ureters with perfect safety.

Tetanus Puerperalis: Curare.—Von Kulen, of Salzburg, recently had a patient, twenty-one years old, primipara, whom he delivered with forceps. On the second day after delivery, febrile symptoms were observed. On the eleventh day, trismus was noted, which was followed by tetanus. On the thirty-third day, after the tetanic symptoms had moderated somewhat, the woman died of peritonitis. To combat the tetanus, chloral hydrate and curare were employed. The latter remedy, subcutaneously injected, had a happy effect to this extent, after its use, the tetanic convulsions always became much less violent for a period of from four to five hours.

Acquired Hæmatokolpos.—Prof. C. v. Braun brought before his class, a few days since, a woman with a somewhat anomalous affection. The woman, twenty-one years old, a native of Galizien, had been delivered, four months previously, of a healthy child; the puerperal process was protracted and severe. When she had fully recovered, and was again restored to life and health, her husband found the vagina had disappeared. His discovery was confirmed by Dr. Braun's examination before the class. The introitus vagina was entirely closed by a membrane of cicatricial connective tissue. Examination, per rectum, revealed an empty uterus, and the portion of the vagina above the membrane filled with about one-third litre of menstrual blood. In this manner, an acquired hæmatokolpos simulated very closely the congenital affection.

The condition is easily explained, when we consider that rents in the vagina, where there is such a rich formation of connective tissue, can readily heal in such a manner as to produce complete occlusion of the canal. The treatment of the case was very simple, consisting

in scarification of the membrane, and in its removal by the fingers.

Dr. Braun said that, up to the present time, he had operated upon some ten cases of congenital hæmatokolpos, but had never seen such a case as the present one, and indicated, by this fact, its rarity.

Prof. Klebs has recently received a call from Prague to Zürich. Klebs is now in Zürich negotiating, but has not yet decided to give up his chair in the Czechische University. The Bohemian students in Prague have held meetings, beseeching the Professor to remain. Prof. Breisky, one of Klebs's most powerful opponents, is vehement in his denunciations of the germ theory generally, and of its Prague exponent in particular. A Vienna weekly journal summarizes the matter thus:

"After all, we believe that Klebs, who finds neither support with the Direction of the University, nor with his colleagues, neither with the students, nor with the medical societies, neither with the great public, nor with the press, will not let pass by such an opportunity to leave a university which, with the possible exception of pecuniary recompense, offers to him no satisfaction or happiness."

Decidual Hæmorrhage.—Dr. Carl Braun recently related the following history of a case in his lying-in ward: A woman, of middle age, six months advanced in her first pregnancy, while at work in her kitchen, was suddenly astonished by a severe hæmorrhage from the genitals. From the sudden occurrence of a large hæmorrhage, the conjecture that it came from the larger vessels was admissible. The blood itself was perfectly pure and unmixed with vaginal mucus. It is possible to affirm, positively, that the hæmorrhage came from the uterine mucous membrane, out of the decidua, rich in bloodvessels, and was due to a displacement between the decidua reflexæ and vera. Digital examination showed the placenta, attached to the posterior wall of the uterus, approaching the position of placenta prævia. As the latter condition occurs so much less frequently in primiparæ than in multiparæ, it need not be considered in this connection. The treatment was expectant; its important feature, perfect rest. The opinion that decidual hæmorrhage will return every month, during pregnancy, is entirely erroneous.

Jefferson Medical College.—At the annual meeting of the Board of Trustees of the Jefferson Medical College held on March 29th, the following letter from Prof. S. D. Gross was presented:

To the President of the Honorable Board of Trustees of the Jefferson Medical College:—

Dear Sir—Advancing age and a desire, after a laborious professional life of fifty-four years, to spend the remainder of my days in comparative repose, induce me to ask your board to accept my resignation of the Chair of Surgery which, by a unanimous vote, they did me the honor to confer upon me twenty-six years ago. During this long period it was my good fortune to be associated with learned, distinguished, and honorable colleagues, who always received my earnest co-operation and support in every measure designed to advance the best interests of the school, and to maintain it in that lofty position which it is universally acknowledged, both at home and abroad, to occupy.

In severing my relations with you and with my associates, I desire to assure you that I shall ever feel a deep interest in my Alma Mater, and pray that she may continually advance in prosperity and influence, and be in all time to come an honor to her founders, to the various faculties that have ministered at her shrine, and to the Trustees who have, in successive stages of her career, so wisely shaped and controlled her destinies. I lay down the robes of office not without regret, but with clean hands and with the conciousness that in all my teachings, extending in different schools over a period of forty-eight years, I was ever governed by an eye single to the welfare of my pupils, and the honor and dignity of my profession.

I am, dear sir, very respectfully, your friend and obedient servant, S. D. Gross.

At the conclusion of the reading of the letter, the following resolutions were adopted by the Board:

Resolved, That, in consideration of the long and continued faithful services of Dr. S. D. Gross, he is hereby elected Emeritus Professor of Surgery of the Jefferson College.

That the Board of Trustees, while regretting its necessity, feel bound to recognize the reasons assigned by Dr. Gross for his resignation, and therefore accept the same.

Nominations to fill the vacancy caused by the resignation of Prof. Gross were then in order, and Dr. S. W. Gross and Dr. J. H. Brinton were named and unanimously elected—Dr. Gross to the chair of Principles of Surgery and Clinical Surgery, and Dr. Brinton as Professor of the Practice of Surgery and Clinical Surgery.

Dr. Samuel W. Gross was born in Cincinnati in 1837, and graduated in medicine in the Jefferson Medical College in 1857. He served with distinction in the medical corps of the army during the late war. He is the author of a valuable work on the Tumors of the Mammary Gland, and of a Treatise on Impotence and Sterility, and has been a frequent contributor to our periodical literature. His papers on "Gunshot Wounds of the Bones and Joints," "Wounds of the Internal Jugular Veins," "Ulceration of the Veins," and on "Digital Compression in the Treatment of Aneurism," are familiar to surgical readers.

Dr. Brinton was born in Philadelphia, and received a liberal education at the University of Pennsylvania. He subsequently studied medicine at the Jefferson School, from which he graduated in 1852. In 1861 he entered the army as a surgeon of volunteers, and served with distinction until 1865, when he tendered his resignation to resume his private practice in Philadelphia. Dr. Brinton's contributions to surgery have been characterized by practical knowledge and sound judgment. His exhaustive paper on amputation at the knee-joint is constantly quoted by surgical writers.

These selections may be considered as extremely judicious, and calculated to maintain the honor of the chair which has been successively rendered lustrous by the teachings of McClellan, Mütter, and the elder Gross.

The Public Health.—For the *week ending March 25*, the following additional items are given. From *small-pox* there were 15 deaths in New Orleans; 5 each in the District of Columbia and Richmond, Va.; 4 in Hudson Co., N. J.; and none in Brooklyn, but 5 new cases were reported. From *cerebro-spinal meningitis*, 5 deaths in Hudson Co., N. J.; 1 in Wheeling, W. Va.; and 6 in Buffalo. *Diphtheria* caused 15 deaths in Brooklyn; 3 in the District of Columbia; 5 in Detroit, where there were 23 new cases; 3 in Hudson Co., N. J.; and 1 each in Buffalo and Omaha, Neb. Brooklyn reports 11 deaths from *croup;* Hudson Co., N. J., 8; and the District of Columbia, 1 death. From *typhoid fever* there were 2 deaths each in Brooklyn, the District of Columbia, and Buffalo; 4 in Hudson Co.; and 1 in Wheeling, W. Va. There was no marked change in the mortality from *scarlet fever* in Brooklyn, the deaths being 29 as compared with 26 for the preceding week. There were 13 deaths from this cause in Hudson Co.; 5 in Buffalo; 1 in Detroit, and 14 new cases; and 1 in Vicksburg.

From *measles*, 6 deaths in Brooklyn; 3 in Hudson Co.; and 1 each in Buffalo and Detroit. There were 4 deaths from *whooping-cough* in Brooklyn. *Consumption* caused 29 deaths in Brooklyn; 21 in the District of Columbia; 4 each in Hudson Co., and Detroit; 3 each in Richmond, and Wheeling, W. Va.; 2 in Buffalo; and 1 in Vicksburg. There were 58 deaths from *acute lung diseases* in Brooklyn; 17 in Hudson Co.; 15 in the District of Columbia; 18 in Buffalo; 6 in Richmond; 3 in Detroit; 2 each in Omaha and Salt Lake City; and 3 in Davenport.

The mortality returns of a number of prominent places for the *week ending April 1* furnish the following facts:

Small-pox.—The marked diminution in the number of deaths from small-pox in Cincinnati, published last week, seems not to have been an indication of a rapid decline of the epidemic, since the deaths this week, 37, exceed those of any of the preceding eight weeks. There were 12 deaths in New York City; 4 in Philadelphia; 8 in Pittsburg; 5 in St. Louis; 4 in Dayton; and 2 in Memphis. There were 3 new cases in Boston, 20 in Chicago; and 30 new cases in Pittsburg. The whole number of deaths in South Bethlehem, up to and including the 4th of April, has been 66. 149 cases are still under treatment. The vaccination of immigrants arriving at the port of Philadelphia from Liverpool, who have not been properly protected, has been conducted during the past few weeks. In one or two instances small-pox has developed after the vessel had left the foreign port.

Cerebro-spinal Meningitis.—Only five among seventeen prominent places report deaths from this cause. They are as follows: New York City, 7; Philadelphia, 5; Cincinnati, 2; Chicago, 4, and Memphis, 1.

Croup.—This disease caused 29 deaths in New York City; 9 in Philadelphia; 3 in Boston; 3 in Cincinnati, 5 in Chicago, and 1 each in Providence and Dayton.

Diphtheria.—An increase in the number of deaths from diphtheria is noticed in New York City, Philadelphia, Boston, and Cincinnati. The returns for the week are as follows: New York City, 44; Philadelphia, 13; Boston, 8, and 18 new cases; Pittsburg, 3; Cincinnati, 4; Chicago, 6; St. Louis, 2, and New Haven and Wilmington, Del., each 1 death.

Scarlet Fever.—No marked change is noticed in the mortality returns from scarlet fever. The deaths were as follows: New York City, 73; Philadelphia, 6; Pittsburg, 3; Boston, Chicago, and Cincinnati, each 2; St. Louis, 4, and Providence, 1.

Typhoid and Typhus Fevers.—There were 3 deaths from typhoid fever in New York City, the same as in the preceding week; 17 in Philadelphia, where the disease is quite prevalent; 3 each in Boston and Cincinnati; 4 in St. Louis; 5 in Chicago; 2 each in New Haven, Indianapolis, and Wheeling, W. Va., and 1 each in Louisville, Providence, Wilmington, Del., and Memphis. There were 3 deaths from typhus fever in New York City.

Malarial Fever.—New York City reports 7 deaths from malarial fever; Chicago, 3; Philadelphia and St. Louis, each 2, and New Haven, Indianapolis, and Memphis, each 1.

Measles and *Whooping-cough.*—But few deaths are reported from these diseases except in New York City, where the former disease shows a tendency to increase. From measles there were 44 deaths in New York City, as compared with 24 the previous week; 6 in Chicago; and 2 deaths in Philadelphia. From whooping-cough there were 19 deaths in New York City; 2 in Philadelphia; 3 in Boston; 3 in Chicago; and one 1 each in Pittsburg, Cincinnati, Nashville, and Augusta.

Consumption and Pneumonia.—The deaths from consumption were as follows: New York, 109; Philadelphia, 70; Boston, 36; Cincinnati, 21; Chicago, 25; St. Louis, 23; Louisville, 10; Providence, 9; Indianapolis, 7; Wilmington, Del., and Milwaukee, each 6; Nashville, 5; Augusta, 3; Jacksonville, Flo., and Memphis, each 2; and New Haven, Dayton, O., Portland, Pittsburg, and Wheeling, W. Va., each 1. From pneumonia there were 95 deaths in New York City; 32 in Philadelphia; 23 in Boston; 8 in Cincinnati; 8 in Pittsburg; 25 in Chicago; 14 in St. Louis; 7 in Louisville; 6 in Milwaukee; 5 in Providence; 4 in Nashville; 3 in Portland; 3 in Indianapolis; and 1 each in New Haven, Wilmington, Del., Dayton, O., Augusta, and Wheeling, W. Va.

Erysipelas.—Only 7 deaths occurred during the week from this disease in a population of over 2,800,000; 5 of these took place in New York City; and 1 each in Boston and St. Louis.

Vital Statistics of New York City for 1880.—The total number of deaths in New York City in 1880 amounted to 31,937, of which 16,831 were of males, and 15,106 were of females. Natives of the United States numbered 20,947, and of foreign countries 10,990. There were 692 deaths among the colored population. The annual death-rate per 1000 was 26.47. By far the greatest number of deaths in any one period of life occurred among infants in their first year, the number amounting to 8725, or 27.32 per cent. of the total mortality. Under two years there were 11,726 deaths, and under five years 14.650 deaths. It thus appears that 45.87 per cent. of the whole number of deaths for 1880 occurred among children under five years of age.

The deaths from *zymotic diseases* amounted to 9573; from *constitutional diseases*, 6974; from *local diseases*, 12,122; from *developmental diseases*, 1949; and by *violence*, 1319. The most prominent cause of death was consumption, the mortality from this disease alone being 4706, or 14.73 per cent. of the whole number of deaths. Next in order follows pneumonia, with 2822 deaths; and then Bright's disease and nephritis, with 1418 deaths; diphtheria, 1390; bronchitis, 1375; membranous croup, 910; and convulsions, 731 deaths.

Of the zymotic diseases, diphtheria was the most fatal, and membranous croup the next so; the aggregate mortality from these two diseases being 2300. Scarlatina caused 618 deaths; measles, 479; small-pox, 31; whooping-cough, 277; erysipelas, 171; typhus fever, 3; typhoid fever, 241; cerebro-spinal fever, 170; malarial and simple continued fevers, 470; and quinsy, 16.

Diarrhœal diseases, which include cholera infantum, cholera morbus, diarrhœa, dysentery, entero-colitis and diarrhœal colitis, and gastro-enteritis, caused 3947 deaths, or 12.36 per cent. of the total mortality. There were 2788 deaths from diseases of the brain and nervous system. By sun-stroke there were 116 deaths; by suicide, 152; and by drowning, 238.

The deaths for the year 1880 were 3,595 in excess of those of the preceding year, and the death-rate was considerably higher than the average of the previous four years. Of the 31,937 deaths, 17,816 were reported in tenement-houses,[1] and of this number 10,101 were under 5 years of age. In houses containing less than 4 separate families there were 7,538 deaths; of this number, 2,999 were under 5 years of age. It is a significant fact that 56.69 per cent. of the total mortality in tenement-houses occurred among children under 5 years of age, while the percentage of deaths of children under 5 years of age to the whole number of deaths occurring in houses which contain less than 4 families was only 39.79.

The greatest monthly mortality occurred in June, July, December, and August, in the order named; and

[1] Houses containing more than 3 independent families; houses containing less than 4 separate families are classed as private.

the least mortality in February, January, March, and September. Zymotic diseases were most prevalent in June, July, and August. Local diseases caused most deaths in April, May, June, and December, while constitutional diseases were quite evenly distributed among the twelve months.

The number of births reported during the year was 27,536, which is estimated to be about 75 per cent. of the number actually occurring. Of this number, 27,174 were white, and 362 colored; 14,356 were males, and 13,179 were females, and the sex of one was not reported. The place of nativity of 11,388 mothers and of 8,624 fathers was the United States; that of 426 parents was either unknown or not given, and the remaining 34,634 parents were born in foreign countries.

The number of marriages registered during the year was 9,002, which is estimated to be about 80 per cent. of the number that took place. Of this number, 211 males and 201 females were colored, and 10 white women married colored men. The brides born in the United States numbered 5,004, and the grooms 4,174.

The whole number of still-births registered amounted to 2,362, of which 1,285 were males, and 1,060 were females: the sex of 17 was unknown or not given.

We are indebted to John T. Nagle, M.D., Deputy Register of Records, N. Y., for a copy of the report from which the facts above given have been gleaned.

Health in Michigan.—The State Board of Health Bulletin for the week ending March 25th, 1882, states that pneumonia, membranous croup, intermittent fever, influenza, measles, rheumatism, bronchitis, tonsillitis, whooping-cough, and mumps, have increased in area of prevalence. No marked decrease in area of prevalence occurred in any disease reported.

Small-pox was reported at 5 places, as follows: at Geneva, Van Buren County (one new case from Chicago), March 23rd; at Iosco, Livingstone County (one case), March 24th; at Detroit, and at Milford, March 25th; at Grand Rapids, March 28th, 1882.

Nephrectomy.—On March 10, Mr. James Adams, at the London Hospital, excised a kidney from an adult male. The symptoms were persistent hæmaturia with pain in the right loin, shooting down the thigh. The kidney was explored for calculus, but none was found, but the greater part of it was occupied by medullary sarcoma. After some difficulty, owing to adhesions, the organ was removed. The case will be published in detail shortly.—*Brit. Med. Journ.*, March 18, 1882.

Mr. Knowsley Thornton removed the right kidney from a young woman at the Samaritan Hospital on March 11th. The case was one of pyonephrosis, and the kidney was incised and drained through the loin for a month before its complete removal was decided upon. The kidney was removed by abdominal section, the incision being made outside the rectus abdominis, as recommended by Langenbuch, of Berlin, in the discussion on Nephrectomy at the Congress. Mr. Thornton found great advantages from this incision, as compared with either the ordinary median incision or the lumbar section. The patient was progressing very satisfactorily four days after the operation, there having been less fever and constitutional disturbance than there often is after an ordinary ovariotomy. The patient from whom Mr. Thornton removed an extra-uterine fœtation by abdominal section at the Samaritan Hospital a fortnight ago is quite convalescent.—*Med. Times and Gaz.*, March 18, 1882.

Massachusetts General Hospital.—Dr. John Homans has been appointed Visiting Surgeon to the Massachusetts General Hospital, to fill a vacancy caused by the resignation of Dr. Samuel Cabot.

Chicago Medical College.—Dr. Oscar C. DeWolf has been elected to the Chair of State Medicine in the Chicago Medical College.

Color Blindness.—A joint resolution was introduced during the present session of Congress authorizing the President to appoint some person suitably qualified to attend any international congress in any European country for determining uniform standards of examination for color blindness and test for visual acuteness in persons employed in the navy and merchant marine, as recommended at the last meeting of the International Congress.

Harvard University.—Dr. F. L. Knight has been appointed Assistant Professor of Laryngology; Dr. Wm. L. Richardson has been appointed Assistant Professor in Obstetrics; Drs. Chas. B. Porter and John Collins Warren have been appointed Assistant Professors of Surgery in Harvard Medical College.

Baltimore Academy of Medicine.—At the annual meeting of the Baltimore Academy of Medicine, held March 7, the following officers were elected for the ensuing year: President, Dr. J. C. Thomas; Vice-President, Dr. J. A. Steuart; Recording and Corresponding Secretary, Dr. B. B. Browne.

Medical College Commencements.—The Third Annual Commencement of the Fort Wayne College of Medicine, Indiana, was held on March 1; fifteen degrees of Doctor of Medicine were conferred.

The Annual Commencement of the Jefferson Medical College was held in Philadelphia on March 30, and the degree of M.D. was conferred on 247 candidates, which, with a single exception, constituted the largest graduating class this school has ever had. At the same commencement the degree of Doctor of Laws was conferred upon Dr. Thomas Addis Emmet, of New York.

The Influence of Sexual Excitement on Wounds.—In a paper recently published in the *Lyon Médicale*, M. Poncet draws attention to the evil effects of sexual intercourse when indulged in during convalescence from injuries, operations, etc., and suggests that this may be a not very unfrequent, though unrecognized, cause of some of the mishaps and complications that occur in private practice. The sexual act produces a certain amount of shock which, M. Poncet thinks, may be placed side by side with traumatic shock, and which leaves the patient for a certain time after indulgence in a condition of "least resistance," during which he is especially susceptible to morbid influences. With regard to the impression produced even in health by the act of coitus, some thermometrical experiments undertaken by an interne of the Lyons Hospital are quoted. A thermometer placed in the rectum was carefully observed on nine occasions; and it was found that the temperature was always from five-tenths to six-tenths of a degree Centigrade (nearly 1° Fahr.) lower just after than before coitus. During the act, the temperature rose slightly above normal. In illustration of his views, M. Poncet gives notes of seven cases observed in his own practice, where complications were ascertained to have followed coitus. Four of these patients had lesions of the hand or finger, and all were going on well up to the time of sexual indulgence, which was quickly followed by pain and swelling of the injured part in one case, and in three others by inflammation of the lymphatics, which went on to suppuration in two. In another case, chronic tetanus was attributed to the disturbing effects of coitus, and in yet another the non-union of a fracture. In the latter case, union took place

when the man was removed from his mistress, who had been nursing him. In the seventh case, pyæmia and death are referred to a similar cause. The patient had undergone amputation of the thigh for an injury, and was in the country away from any known septic influences. The wound was healthy and granulating, when, on the eighteenth day after the operation, he had intercourse. Rigors quickly followed, and death occurred five days later. A somewhat similar case is mentioned on the authority of Ollier. Although these cases are all surgical, M. Poncet also refers to the adverse influence of sexual excitement in some other diseases, notably diabetes and gout.—*British Med. Journal*, March 18, 1882.

A Rare Form of Vascular Disease.—At the consultation at St. Bartholomew's Hospital, on the 2d inst., Mr. Thomas Smith was able to exhibit an instance of an extremely rare form of disease. The patient was a young woman, about nineteen years of age, who presented an abnormality of the circulation of one hand and forearm, which is best classed, perhaps, under the head of aneurismal varix; she could hardly be said to suffer from the condition, as she had been able to discharge her duties as a domestic servant until her comfort was interfered with by a somewhat persistent hæmorrhage from the site of a small abscess in one finger. Large pulsating vessels having the distribution of the veins were to be seen on the back of the hand; the pulsation was accompanied by a purring thrill and a loud buzzing murmur. There were two points about the case which gave it a peculiar interest; first, that there had been no known injury which could have caused a direct communication between the arteries and the veins; there had been, it is true, a severe burn of the hand in early childhood, but there was no reason to suppose that the vessels were especially damaged. The case thus appeared to be an instance of spontaneous aneurismal varix. The second point of interest was that the thrill and loud buzzing murmur were very plainly to be observed in the brachial artery at the bend of the elbow, and in all the arteries of the forearm. These latter vessels all appeared to be enlarged; and these facts led Mr. Smith to suggest that the case had some analogy to the aneurisms by anastomoses commonly seen on the scalp, and that the free communication between the arterial and the venous circulation of the forearm was effected by way of the much-enlarged capillary vessels. In whatever way the case be regarded, it is of singular interest, and probably almost unique.—*British Med. Journal*, March 18, 1882.

The Medical Society of London.—The one hundred and ninth anniversary of this Society was celebrated on the evening of Wednesday, the 8th instant, the Fellows dining together in the Victoria Hall of the Criterion Restaurant. The chair was occupied by the President, Dr. Broadbent, who was supported on the right by the President of the Royal College of Surgeons, on the left by Mr. Francis Mason, the President elect. During the evening, the Society's medals were presented to the recipients by Dr. Broadbent—the Fothergillian gold medal, for a dissertation on the Pathology and Treatment of Whooping-cough, to Mr. Dolan, of Halifax; a silver medal to Dr. Allen Sturge, for his paper on Muscular Atrophy; and a silver medal to the retiring Honorary Secretary, Dr. T. Gilbart Smith, for eminent services rendered to the Society.—*Brit. Med. Journ.*, March 18, 1882.

Discussion on Sclerotomy.—It has been decided by the Council of the Ophthalmological Society of Great Britain, to hold a discussion on sclerotomy. The meeting will probably be held on June 8.

Uniform Nomenclature of Auscultatory Sounds.—At a meeting of the Section on Medicine, during the session of the International Medical Congress in London, August, 1881, Dr. Austin Flint, of New York, Prof. Ewald, of Berlin, Prof. D'Espine, of Geneva, Dr. Douglas Powell, of London, and Dr. Mahommed, of London, were appointed a "Committee to report to the Medical Section of the next Congress, on a uniform nomenclature of auscultatory sounds in the diagnosis of diseases of the chest." In behalf of the Committee, the undersigned will be happy to receive any communications relating to the subject of the report.

Austin Flint,
Chairman.

418 Fifth Avenue, New York.

Dr. Edward Warren Bey.—We are pleased to hear that his Highness, the Khedive of Egypt, has created Dr. Warren Bey, the well-known American physician of Paris, a commander of the order of Osmanié, as a further recognition of his brilliant professional career in Cairo and in Paris.

Bearing-Reins for Horses.—*The British Medical Journal* says, apropos of the ignorant and morbid outbreak of sympathy with the woes of Jumbo which has lately afflicted London, Mr. Flower writes to a contemporary that many of the humane folk who went to bid their troublesome pet a last adieu, and do their best to ruin his digestion, were strangely oblivious to the pain that was being suffered by their own carriage-horses. Whilst the humble cab-horses were standing "at ease," with liberty for their heads and necks, most of the carriage horses were tied up so tightly that they could not lower their heads one inch, and with their lips drawn up most painfully from tight bearing-reins. It is, indeed, singular that the perpetual tossing and turning of their horses' heads to get a little relief from the evident pain and discomfort they suffer, does not induce humane and sensible people to abolish the use of these instruments of daily torture.

What is said about the New York Code of Ethics.

At any rate, the New York State Medical Society has placed itself in a very unenviable position. We imagine that some of the doctors there must feel the disgrace very keenly.—*Atlanta Medical Register.*

These two clauses [concerning consultations] contain all the originality of the New Code which, with this exception, is but a rehash or an abbreviation of the old; and on these two *hang all the law and the profits.—The Southern Practitioner.*

It looks as if the profession of New York had *outworn* the Code instead of *outgrown* it. It is hoped in this region that they may reconsider their ill-advised action, and not be lost to their friends and fellows in other States.—*Louisville Medical News.*

The American Medical Association will, of course, justly repudiate the New York Medical Society, and all who yield an allegiance to its recent inexcusable legislation, and the best medical men everywhere will say amen, and amen.—*American Medical Weekly.*

The Code is gotten-up in the interest of the specialists of New York. . . . The time is coming when the barriers between the regular profession and the homœopathic schools will be broken down, but this time will be when the latter have given up their peculiar dogmas and adopted the principles of rational medicine for their guide.—*Pittsburgh Medical Journal.*

The New York State Medical Society has just dropped the time-honored flag of legitimate medicine in the mire, by enacting a law which, for the base reason of money-making, and for nothing else, sanctions consultations with irregular practitioners, when, in such con-

sultations, honorable agreement or honest compromise is impossible.—*Gaillard's Medical Journal.*

Whatever the motive with which it was conceived and executed, we have the clearest conviction of its ill-advisedness and reprehensible character. It will not elevate the standing of the regular profession, whilst it will give credit and respectability to quackery and professional irregularity. Nor can the result, as we believe, be in doubt, since the American Medical Association, backed by all the other State Societies, will be able to maintain an attitude of firmness, and resist the encroachments of the ill-advised and unwarranted authors of such innovations. Encouraged by such support, the better-thinking men of the New York profession will probably band together to form another State society, in affiliation with the National body and its branches, and seeking to elevate rather than pull down the noble profession to which we all feel proud to belong.—*Maryland Medical Journal.*

It seems likely that a medical war of rather large proportions may grow out of this action of the New York Society; but that such a code will ultimately be adopted by medical societies of States containing large cities seems probable, as these always contain numerous specialists, and in their case interest and inclination will tend to make them follow in the footsteps of their brethren of the State of New York.—*Chicago Medical Review.*

How wonderfully changed has the "medical world" become since Dr. Quain threw the bomb into the camp of professional intolerance from the sick-bed of Lord Beaconsfield! Bread and butter has been at stake for some time, and "old-school physic" was ready for surrender. All that was needed was for some "general" to break the ranks and give himself over. *See how the rest of the sheep follow!—The Investigator* (Homœopathic).

Come on, brethren, the world moves, and old-school medicine is not entirely hopeless.—*St. Louis Eclectic Medical Journal.*

NOTES AND QUERIES.

ABSORPTION FROM THE BLADDER.

To the Editor of THE MEDICAL NEWS.

Dear Sir: Having just read your editorial in the journal of Saturday, March 25, on absorption from the bladder, I beg to refer you to an article of mine in the *Southern Journal of the Medical Sciences*, for May, 1867, p. 41, entitled "On the Constitutional Effects Produced by Substances Introduced into the Urethra," in which I mention experiments performed by me in 1857, showing the extreme rapidity with which both morphia and atropia were absorbed by the urethra, in one case all the characteristic symptoms of atropia poisoning being produced in less than a minute.

I remain, dear sir, yours truly,

J. L. CRAWEOM, M.D.

NEW ORLEANS, March 29, 1882.

[The editorial alluded to was not intended to give a complete analysis of the literature of the subject. The interesting results of Dr. Craweom were, however, overlooked unintentionally, as they not only give strong confirmatory evidence of the activity of absorption from the urethra, but locate with great accuracy the position where this occurs most energetically, viz., the prostatic portion of the urethra and neck of the bladder.—ED.]

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MARCH 28 TO APRIL 3, 1882.

GARDINER, JOHN DEB. W., *Captain and Assistant Surgeon.*—To report in person to the Commanding General, Department of Arizona, for assignment to duty.—*S. O. 71, A. G. O., March 28, 1882.*

GARDNER, EDWIN F., *Captain and Assistant Surgeon.*—To report in person to the Commanding General, Department of the Columbia, for assignment to duty.—*S. O. 71, A. G. O., March 28, 1882.*

ROBINSON, SAMUEL, Q., *Captain and Assistant Surgeon.*—To report in person to the Commanding General, Department of the Columbia, for assignment to duty.—*S. O. 71, A. G. O., March 28, 1882.*

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE, FROM JANUARY 1 TO MARCH 31, 1882.

BAILHACHE, P. H., *Surgeon.*—To proceed to Richmond, Va., as Inspector, January 31, 1882.

VANSANT, JOHN, *Surgeon.*—Detailed as President of Board of Survey for the physical examination of officers of the Revenue Marine Service, March 18, 1882.

WYMAN, WALTER, *Surgeon.*—When relieved by Surgeon Austin, to proceed to Baltimore, Md., and assume charge of the service at that port, March 4, 1882.

FESSENDEN, C. S. D., *Surgeon.*—To proceed to Greenport and Sag Harbor, N. Y., as Inspector, January 26, 1882. Detailed as President of Board of Survey for the physical examination of pilots, to meet at Boston, Mass., February 16, 1882.—February 7, 1882.

PURVIANCE, GEORGE, *Surgeon.*—To proceed to Gloucester, Mass., to extend relief to shipwrecked seamen, January 12, 1882. Detailed as Recorder of Board of Survey for the physical examination of pilots, to meet at Boston, Mass., February 16, 1882.—February 7, 1882.

AUSTIN, H. W., *Surgeon.*—To proceed to Cincinnati, O., and assume charge of the service at that port, relieving Surgeon Wyman, March 4, 1882.

GODFREY, JOHN, *Passed Assistant Surgeon.*—When relieved by Passed Assistant Surgeon Goldsborough, to proceed to New Orleans, La., and assume charge of the service at that port, March 4, 1882.

GOLDSBOROUGH, C. B., *Passed Assistant Surgeon.*—When relieved by Surgeon Wyman, to proceed to Mobile, Ala., and assume charge of the service at that port, March 4, 1882. Granted leave of absence for eight days, March 24, 1882.

IRWIN, FAIRFAX, *Assistant Surgeon.*—Granted leave of absence for seven days, January 18, 1882.

O'CONNOR, F. J., *Assistant Surgeon.*—To report to General Superintendent, L.S.S., for duty as member of Board to examine keepers and crews of the Life-saving Service, January 4, 1882. Relieved on account of sickness, and directed to report to Surgeon-in-charge, New York, N. Y., for temporary duty, January 18, 1882. To proceed to Detroit, Mich., and report for duty to the Surgeon-in-charge, February 9, 1882.

BANKS, C. E., *Assistant Surgeon.*—To proceed to Portland, Oregon, and assume charge of the service at that port, March 1, 1882.

DEVAN, S. C., *Assistant Surgeon.*—Detailed as Recorder of Board of Survey for the physical examination of officers of the Revenue Marine Service, March 18, 1882.

URQUHART, F. M., *Assistant Surgeon.*—To report to General Superintendent, L.S.S., for duty as member of Board to examine keepers and crews of the Life-saving Service, January 18, 1882.

KALLOCH, P. C., *Assistant Surgeon.*—To proceed to New York, N. Y., for temporary duty, January 24, 1882.

RESIGNATION.

HEBERSMITH, ERNEST.—Resignation as Surgeon accepted, to take effect November 26, 1881.—January 17, 1882.

PROMOTION.

SMITH, HENRY, *Surgeon.*—Promoted and appointed Surgeon from January 20, 1882.—January 20, 1882.

APPOINTMENT.

KALLOCH, PARKER C., M.D., of Pennsylvania, having passed successfully the examination required by the Regulations, was appointed an Assistant Surgeon by the Secretary of the Treasury, January 23, 1882.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XL. SATURDAY, APRIL 15, 1882. NO. 15.

ORIGINAL LECTURES.

INFLUENCE OF ANTISEPTICS ON THE PERIODS OF AMPUTATION AFTER CRUSHING INJURIES.

A CLINICAL LECTURE.

BY STEPHEN SMITH, M.D.,

SURGEON TO BELLEVUE AND ST. VINCENT HOSPITALS, NEW YORK.

GENTLEMEN: The boy, about to submit to amputation of the leg, entered the hospital four days since suffering from a crushing wound of the leg, received by the wheel of a street car. The statement of the boy, and of the bystanders, was that the wheel traversed the leg just above the ankle, and an examination proves that they are correct. The limb was completely crushed in all its tissues at that point. But it must be remembered that it is usual for persons falling before a car wheel, and receiving injuries, to suppose that the wheel passed over the limb, when, in fact, this rarely happens. Such persons are greatly excited and severely injured, and naturally have the impression that the wheel passed over rather than by the side of the injured part. The truth is, however, that the wheel usually pushes the limb before it, and crushes and lacerates its side and fractures the bones. You can determine the nature of the injury by examination. If the wheel has actually traversed the limb, it will be, as in this case, so thoroughly crushed that bones are comminuted, muscles reduced to a pulp, and arteries, veins, and nerves destroyed. The entire destruction of a limb when a car wheel passes over it on a rail, may be tested by experiment with the dead subject. In such test you will find it somewhat difficult to make a car wheel mount over the limb; the tendency is to push the limb along on the track, and crowd it off upon one side. In this act the side of the limb will be lacerated and the bones broken, but the muscles, nerves, and arteries may be uninjured on the opposite side.

When called to a case of injury by the crushing effects of a car wheel, you should first examine to determine whether or not the wheel traversed the limb. If you are satisfied that it did pass directly over it, the limb cannot be saved; amputation is inevitable. If, however, you decide that the limb was pushed off the rail by the wheel, the question of amputation will be more or less doubtful, according to the nature and extent of the injury. In our time we can save limbs that surgeons formerly would not hesitate to amputate. As a rule, if the arteries and nerves are still intact, the limb can be saved. Disinfectants and plaster of Paris, judiciously used, will save the most unpromising cases of this kind.

But the question which chiefly interests us in connection with this case is this: Why was the operation, when amputation was, from the first, inevitable, delayed to this critical period? It will be a sufficient answer to that question to state that the patient is in better condition for the operation to-day than he has been at any time since the injury was received. In explaining this statement, I wish to emphasize the fact that antisceptics, efficiently employed in these cases, greatly modify our procedures. When it was decided that the injury necessarily involved the loss of the limb, the patient was profoundly under the influence of the shock of the injury. His surface was pallid, his pulse small and rapid, his respirations hurried; he was restless, and large drops of sweat stood on his forehead. The first indication was, therefore, to restore him from the shock, which threatened life immediately. Stimulants, dry friction, and external heat were employed. The second indication was to dress the limb. The appliances used were these, viz.: The limb was laid on a rubber cloth, placed on pillows, and so arranged as to make a trough, which inclined downwards towards and beyond the foot of the bed. Above the limb a bottle was suspended, containing a three per cent. solution of carbolic acid, from which common candle wicking depended; the wicking was so arranged that the carbolized water constantly fell on the entire crushed wound, and the water ran off into a vessel at the foot of the bed. The object of this irrigation was to prevent putrefaction and inflammation.

The patient slowly rallied, and at the end of eighteen hours was warm, and in a favorable condition. Formerly, this was the period for amputation, for the danger which the older surgeons feared was the impending inflammation, which usually began in about twenty-four hours. But no prudent surgeon has subjected such a patient to the second shock, which results from an amputation, without a feeling of keen regret, and with intense anxiety. Too frequently has he been arrested in his operation by the announcement of his assistant that the patient was pulseless. Artificial respiration, hypodermic injections of brandy, etc., have rallied the vital forces so that the operation could be completed, and the patient removed to bed. But the revival was momentary. The nervous centres were too profoundly damaged to maintain their functions and death was inevitable.

Since carbolic acid has become so generally used in wounds I have ceased to regard time as an element in amputations. My attention was first called to the power of this class of agents to prevent inflammation, many years before carbolic acid came into use. A crushed foot came under my care, and it was doubtful whether an amputation would be required or not. I suspended the limb, and irrigated the wound with creasote water for ten days, during which time there was not the slightest evidence of inflammation in the part, nor was there any fever. At the end of that period it was apparent that the foot could be saved, and only the simplest dressings were required to perfect a cure.

It is now a matter of every day's experience that carbolic acid constantly applied to crushed tissues, as in irrigation, will arrest all tendency, both to putrefaction and to inflammation. This boy is a striking illustration of the power of this agent to protect a patient from those secondary evils which occur to injured parts. For four days this patient has been recovering from the primary injury, without being in the slightest degree damaged by the local conditions. There has been no other fever than that of reaction from nervous prostration, and that passed off on the second day. He has been taking food freely, his sleep is sound and refreshing, his pulse is nearly normal, and in every respect he seems to be fully restored. The shock of amputation will now be comparatively slight; certainly will not be dangerous in the sense it would have been if I had amputated within twenty hours of the injury. But to guard him against the possibility of harm, he has been taking two teaspoonfuls of whiskey with milk, every hour for four hours, which has caused moderate exhilaration.

It is not absolutely necessary to amputate to-day, so

far as the limb is concerned, for we can maintain it in this inert state for many more days, but the patient's general condition is entirely favorable, and as amputation is inevitable it might better be done now, and thus diminish the total length of time required for recovery.

The lesson which I wish to impress upon your minds is this, viz.: In crushing injuries requiring amputation, treat the lacerated parts with carbolic acid water applied by means of irrigation, and delay the operation until the patient is in a favorable condition to endure the shock. I need scarcely say that the same treatment should be adopted in similar injuries which do not require amputation, during the period of impending inflammation. But to be useful, the solution must penetrate the injured tissues, and to effect that it is often necessary to make incisions through the skin.

[The leg was amputated below the knee with but slight shock, and the patient made a good recovery.]

ORIGINAL ARTICLES.

SUPRA-MALLEOLAR OSTEOTOMY,

FOR OUTWARD DEVIATION OF THE FOOT, SUBSEQUENT TO POTT'S FRACTURE HEALED UP IN A BAD POSITION.

BY CHRISTIAN FENGER, M.D.,
OF CHICAGO.

THE operation of osteotomy, introduced into surgery as a means of correcting deviations in the shape and direction of the extremities, in cases in which this deviation was an essential hinderance to the use of the limb thus affected, was first systematized by Von Langenbeck, in 1852, for anchylosis in false position of the hip- and knee-joints.

The operation was performed according to the so-called subcutaneous method, that is, through the smallest possible opening in the skin, a fine saw was passed in upon the bone, and this cut through, the false position corrected, and the cut surfaces of the bone left to unite in the same way as in a common fracture. The small opening in the skin had for its object the prevention of suppuration. The subcutaneous operation of tenotomy has the same object. These precautions were natural and necessary prior to the advent of antiseptic operating and dressing.

A step in advance was made by Gross, of Philadelphia, in 1861, who rendered the operation more easy of performance by substituting the chisel for the saw.

Since this period, that is, for the last twenty years, osteotomy has been a common operation for the correction of the various deviations of the bones of the extremities, arising from rachitis, anchylosis of the joints, fracture healed up in a bad position, or from any other cause.

Even before the Lister method was known in surgery, and employed in osteotomy, relatively little danger was connected with the operation. In most of the cases operated upon, the limbs healed in a correct position, just as they would after a common subcutaneous fracture; but sometimes suppuration would set in, and even erysipelas and pyæmia could not be entirely excluded.

The fear of these complications deterred the profession in general from recommending or making use of the operation in all cases in which it would prove of essential benefit, and, we may say, limited the operation to those cases in which it was imperatively necessary.

The antiseptic method of operating and dressing has done away with this drawback in the indications for the operation, and at the same time has rendered the so-called subcutaneous operation unnecessary. We are now able to cut without fear through the soft parts covering the bone to be divided, making as large an incision as is necessasy to cut through the osseous tissue with ease and safety. Through this opening we can make an incision in the periosteum, denude as much of the surface of the bone as is necessary, cut out by means of saw, and chisel and hammer, a piece of bone of the exact size and shape we require, unite the osseous surfaces with silver sutures, if we deem it advisable, and, in fact, operate with perfect safety and security, allowing sufficient time for all the details of the operation, because we know that we are protected by antiseptic precautions, by which the healing by first intention of a wound, whether large or small, is accomplished with equal rapidity and safety.

We must bear in mind, however, that this wider field in the indications for the operation which has been opened up by the Lister method, at the same time places an increased amount of responsibility upon the operator, since he now is held responsible for all septic accidents which might occur subsequent to the operation.

When all antiseptic precautions are taken, down to the most minute details, during the operation and in the course of the after-treatment, and carried through systematically, there can be no more danger than in subcutaneous osteotomy.

It was with this conviction that I did not hesitate to extend the employment of osteotomy to cases of false position of the foot following Potts' fracture. In these cases there is no vital indication for the operation, as such patients are able to limp around, with or without the use of a cane; but the deviation of the foot impairs their walking so considerably that a large number, particularly of the lower class of the people, are thereby unable to earn a living, as many of them cannot learn or work at a trade in which walking or the free use of the lower extremities does not play an important part.

The following cases will show that supra-malleolar osteotomy can be performed in such cases, not only without danger to the patient's life, but with the result of completely restoring the usefulness of the foot, so as to enable him to walk just as well as before the fracture and subsequent deviation had taken place.

CASE I.—*Outward deviation of left foot, subsequent to compound comminuted Pott's fracture in a syphilitic individual—Supra-malleolar osteotomy, followed by suppuration—Union in eight weeks—Out of bed in nine weeks—Able to bear weight on foot in eleven weeks—Open sinuses for more than a year—Subsequent complete recovery, with perfect ease in walking.* (Fenger, Chicago.)

Henry H., a clerk, thirty-eight years of age, was admitted to Cook County Hospital, June 16, 1879. The patient had syphilis some years ago, but with

this exception had been always healthy, until eighteen months previous to his entrance to the hospital, when, in St. Louis, Mo., he received an injury which caused a compound comminuted fracture and dislocation of the left ankle-joint. He was treated for five months in a hospital in St. Louis, and, at the end of that time, was able to walk around with a cane. On account of an outward deviation of the foot, however, walking was painful, and could be endured for only a very short time. In June an abscess formed around the internal malleolus, which was opened on admission, and some pus evacuated. No denuded bone could be felt through the wound.

He left the hospital at his own request, August 10, the wound not yet being healed, but returned September 1, suffering with increased swelling and pain, and was placed under my care.

Examination.—Patient is unable to walk on account of pain in the region of the left ankle-joint, at which point is found a Pott's fracture healed in a bad position, with outward deviation of the foot. The internal malleolus is very prominent, considerably enlarged, and covered on its inner surface with a layer of adherent cicatricial tissue. Above and exterior to the external malleolus is an irregularly shaped ulcer, about three-quarters of an inch in diameter, with quite abrupt edges and an uneven floor, covered with grayish-red discolored granulations, and secreting a large amount of thin, grayish pus. The surrounding skin is dark-red, swollen, and tender.

Fig. 1.

The deformity of the foot (shown in Fig. 1) is the real cause of his inability to walk, as the line of gravity of the limb falls internal to the foot, or, in other words, the foot is in a position of dislocation outside of the line of gravity; that is, the line of gravity of the foot forms an angle with the line of gravity of the limb, which opens outwards, and in which the apex of the angle corresponds to the base of the internal malleolus, the seat of the old Potts' fracture.

To remedy this deformity—after careful investigation upon the cadaver, as to the best method of performing osteotomy in such cases—I devised the following operation:

September 12.—I operated, assisted by Dr. Sawyers, and in the presence of Drs. Gunn, Isham, Jacobson, and Lee. The patient was anæsthetized with ether. A transverse semilunar incision was made over the inner surface of the inferior extremity of the tibia, two inches above the apex of the internal malleolus, through the skin and subcutaneous tissue, being careful not to open the sheaths of the tendons of the anterior and posterior tibialis muscles. A transverse incision was then made through the periosteum, and a short longitudinal incision on either end of this. The two flaps of periosteum were separated from the bone with a gouge, and a base three-quarters of an inch in width was marked out with a saw, for a wedge-shaped piece of bone, which was cut out by means of hammer and chisel, the point of the wedge being at the external border of the tibia. The attempt was now made to reduce the deformity by taking the foot in the right hand and bending it over the knee. While reducing this deformity, the fibula fractured at about an inch below the cut through the tibia, and the upper fragment of the external malleolus broke out through the ulcer described above, thus making a compound complicated fracture which extended into the ankle-joint. The external malleolus was the seat of a diffuse osteoporotic osteitis, and consequently the osseous tissue at this point was very fragile. The remaining part of the diseased malleolus was now removed, the cut surfaces of the tibia approximated and secured by strong silver wire sutures, a drainage-tube inserted, the wound closed by sutures, and Lister dressing applied.

The leg was then placed in an apparatus devised for the purpose, which consisted of a padded leather band around the upper part of the calf, which contained a heavy steel bar, that came down on the external side of the foot, bearing a foot-piece, which was inverted and kept in place by a strap on the inner aspect of the leg. The steel bar, when passing over the external malleolus, was bent out so as to permit the application of Lister dressings around the ankle-joint without removing the apparatus. The band was secured around the leg by leather straps and buckles, and the foot fixed to the foot-piece by roller bandages. The whole apparatus was suspended in a Hodgen's anterior splint.

13th.—A little hæmorrhage occurred during the night, with some pain.

14th.—Wound dressed; no suppuration.

16th.—Wound dressed; very little suppuration, but considerable pain. Applied ice-bag over the dressing.

October 8.—For the last two weeks he has had no pain. The wounds, both over the tibia and fibula, are granulating somewhat luxuriously. Touched with nitrate of silver.

18th.—Wound dressed. Foot seems to be turned

inward a little too much. A compress and bandage was therefore applied to correct the position, but this caused the patient so much pain that it was discontinued.

22d.—Wound dressed. The wound seems to have come to a standstill as regards healing, being covered with soft, pulpy, jelly-like granulations, which were cauterized thoroughly with nitrate of silver.

23d.—A small piece of dead bone came out from the wound over the external malleolus.

26th.—The splint was removed, in order to be used as a pattern in making a splint for a patient upon whom Dr. Gunn was about to perform a similar operation for the same deformity. The leg was placed in a Hodgen's splint.

29th.—Another small piece of dead bone was taken out. The patient has had some diarrhœa. The wounds showed no tendency to heal, and were covered with a thick, grayish, croupous exudate. Cauterized with nitrate of silver.

November 5.—The wound is looking better, and the silver wire is removed.

12th.—Removed the frame and suspension apparatus, and the limb was placed in a fracture-box.

December 4.—For the last two days the patient has had pain around the external malleolus, behind which was a small abscess, which was opened and washed out.

11th.—On account of the discharge the wound has to be dressed every day.

15th.—The discharge ceased and the patient got up and walked around a little on crutches.

25th.—Is up most of the day, and can walk a few steps without crutches. Two sinuses lead to the denuded bone.

January 17, 1880.—All the sinuses are nearly closed, but there is still some swelling.

23d.—A small abscess opened, through which a probe can be passed in deep within the bones.

March 1.—The wound is healing up on both sides with very little discharge.

April 2.—A discharging sinus from the cavity within the tibia was cauterized, three small fragments of bone extracted, the cavity filled with boracic acid, and a drainage-tube inserted.

March 15, 1881.—The last of the superficial ulcers healed, and the position of the foot was straight (as is shown in Fig. 2). The tendo Achillis is in the usual straight line, and upon bearing the weight of the body on the foot no deviation is noticeable. The patient walks two to three miles without inconvenience, and without the use of a cane. The inferior extremity of the tibia is still somewhat enlarged, and there is some tenderness on pressure on its surface.

May 7.—From time to time superficial ulcerations have formed, not upon the cicatricial tissue of the wounds of operation, but below this, on the cicatrix of the original wound caused by the compound fracture. Mobility in the ankle-joint is still somewhat limited, but this does not prevent him from walking without a cane, and without limping.

As far as the bones operated upon are concerned the final result of the operation is perfect, but the long convalescence in the case is an exception, and was due to the specific chronic disease in the bones operated upon.

FIG. 2.

In uncomplicated cases, in which the patient's health is good, and the osseous tissue at the seat of the operation normal, the time for the healing of the cut surfaces of the bones and the osteotomy wound will not greatly exceed the usual limited number of weeks required for the recovery from a common, subcutaneous Pott's fracture. This I intend to show by the following case:

CASE II.—*Outward deviation of left foot, subsequent to Pott's fracture—Operation four months later—Aseptic course without suppuration—Eight days later, drainage-tubes removed—Perfect osseous union in four weeks—Complete recovery.* (Fenger, Chicago, 1880.)

John B., Irish, aged thirty-eight, a painter, was admitted to Cook County Hospital, July 14, 1880. He had previously had good health. On April 15, he was seated beside a tree, eating dinner, and got up suddenly; in so doing, he put his left foot into his dinner-pail; his right foot slipped, throwing his weight on the left foot, which turned outward and upward, causing him much pain. A physician was called, who pronounced the injury a fracture. At this time the foot was turned outward and upward until it was nearly at right angles with the leg. It was placed in loose dressings for a week, after which a starch-bandage was applied, which was continued for four weeks. The patient remained in bed for more than four weeks, and was then allowed to be up on crutches, but was not yet able to bear his weight on the foot. Consequently, four and one-half months after the receipt of the injury, the patient entered Cook County Hospital, and was placed in my care.

On admission, the patient was unable to walk without the aid of a cane. He could not bear weight

on the foot without intense pain. The same deformity existed which has already been illustrated in Case I.; that is, the foot was in a position of outward subluxation; the line of gravity of the limb, instead of being continuous with the line of gravity of the foot, formed with the latter an angle of from thirty to thirty-five degrees, the apex of the angle being at the base of the internal malleolus.

August 13.—The patient having been anæsthetized with ether, I proceeded to perform osteotomy, following the same plan devised in Case I., namely, a transverse incision was made across the lower extremity of the internal surface of the tibia, about one and three-quarter inch above the apex of the internal malleolus. The skin, subcutaneous tissue, and periosteum were divided; the periosteal incision being in the shape of an H, having an elongated cross-bar. The two narrow flaps of periosteum were now loosened from the bone. A narrow retractor was inserted between the periosteum and the bone, so as to avoid opening the sheath of the tendons of the tibialis anticus and posticus. Two parallel transverse incisions were made through the periosteum of the lower end of the tibia, distant about four lines from each other. With hammer and chisel, a wedge-shaped piece of bone was cut out through the whole thickness of the bone, the apex of the wedge being the cortical substance of the external surface of the tibia. The fibula was perforated by means of a drill, in different directions, but on the same horizontal plane. I now grasped the foot with my right hand, pressed my knee against the internal surface of the tibia, from which the wedge of bone had been cut out, and made powerful traction until the bones fractured. This restored the foot to its normal position, in which the cut surfaces of the tibia were in apposition. This position was maintained by means of sutures of heavy silver wire through the bone. A small drainage-tube was now inserted, the wound in the skin united, Lister dressing applied, the leg placed in Dr. Verity's modification of my original apparatus for the dressing and suspension of the foot in the after-treatment of supra-malleolar osteotomy, and the patient placed in a tent, in the grounds of the hospital.

15th.—Pulse, 90; temperature, 99.5°. Wound dressed. No redness, swelling, nor suppuration.

16th.—Pulse, 93; temperature, 99.4°. The patient suffers some pain in the wound. This was controlled by morphia.

21st.—The wound is now superficial. It was dressed; very little discharge. The drainage-tube was removed.

September 1.—The silver sutures were removed, and the foot placed in a fracture-box filled with oakum.

11th.—Firm union of the bony surfaces. The foot was taken out of the fracture-box and placed in a blanket splint. The wound is still superficially granulating.

October 2.—The dressing was removed, and the wound found to be healed. A plaster cast was applied, and the patient allowed to be up on crutches.

11th.—The patient wears the plaster cast continually, is gaining strength rapidly, and is now commencing to bear weight on the foot.

18th.—The patient was discharged from the hospital at his own request.

During the whole course of the after-treatment, the patient's temperature never exceeded 100°.

In January, 1881, I received a letter from the patient, who was then in Wisconsin, asking advice in regard to a cough. In the letter he stated that he was then able to bear his weight on the foot and walk around, without any trace of his former complaints.

(*To be continued.*)

THE USE OF ANHYDROUS SULPHATE OF ZINC AS A CAUSTIC IN CANCEROUS ULCERS.

By WM. C. DABNEY, M.D.,
of Charlottesville, Virginia.

On the 1st of March, 1880, I was consulted by a lady, sixty-seven years old, for a "lump" in her breast, which, she said, had only appeared five weeks before. The lump was about as large as a pullet's egg, and quite hard. The skin over it was puckered, and the nipple retracted. It was not adherent to the tissues beneath it. There was an enlarged gland in the axilla, which suggested a longer period of growth for the tumor, but the patient and her daughter were very positive that it had only been perceptible for five weeks.

In view of the rapid growth and the presence of an enlarged gland, and the further fact that the patient's father had died with cancer of the face, I hesitated to operate, and asked Dr. I. L. Cabell, of the University of Virginia, to see the patient with me. He advised that the whole breast and enlarged gland be removed, and in case of recurrence that anhydrous sulphate of zinc should be employed as a caustic. The general health of the lady was quite good.

On the 4th of March I excised the whole breast and the superjacent skin, and allowed the wound to heal by granulation. The axillary gland was also removed, and one of the branches of the brachial plexus which it surrounded was carefully dissected out. In spite of the care exercised, however, the nerve-trunk was necessarily somewhat contused, and when the patient aroused from the effects of the chloroform she complained of considerable aching and pain in her arm. This lasted for two or three days, and then passed off in great measure.

About six weeks afterwards, when the breast had nearly healed over, the fingers commenced to swell at the joints, and to present a glossy appearance. She complained also of pain in the finger- and elbow-joints, especially on motion.

The wound in the breast was entirely healed in six weeks; but, one week after, it reopened, and in three days' time an ulcer was present as large as a silver half-dollar. The anhydrous sulphate of zinc was applied in the form of powder, and after the slough came away a healthy granulating sore remained, which healed in a few weeks; but, in a very few days, an ulcer again made its appearance, to which the zinc was applied as before. The ulcer each time was very painful, but the pain disappeared

soon after the application of the caustic, and did not recur till the cancerous ulcer formed again. The application of the caustic gave comparatively little pain. My patient lived at a distance, and in the country, so I lost sight of her for some time. On November 1, 1881, I received a letter from her daughter, in which she says: "Zinc has been applied eleven times, burnt alum twice" (the latter was an idea of the daughter's). "I applied alum on the 29th day of December last, which formed a scab which stayed on eleven weeks, to the day. When the alum was applied the second time the scab only remained on two weeks. I then used zinc as before. Pain is generally relieved when the caustic is applied, till a short time before we have to use it again. Her hand is not swollen now, and she doesn't suffer with her arm as much as she did, but she has no use of her fingers."

On the 21st of February last, nearly two years after the cancer was removed, I saw the patient again. A cancerous mass, the size of a pigeon's egg, had made its appearance just above the cicatrix in the breast, and she had a very troublesome cough and considerable shortness of breath. The caustic had been applied in all sixteen times, and had always given relief from pain for some weeks. Her arm was in the condition her daughter had described, and she told me that when the caustic was applied it caused acute pain for some hours in the arm and hand; very little in the breast.

The use of sulphate of zinc as a caustic is not new. It was a favorite remedy with Sir J. Y. Simpson, and is highly extolled by Dr. Stephen Smith, who speaks of it as the most useful caustic known for open surfaces.

Sir James Simpson (quoted by Dr. Smith) thus summarizes its advantages as a caustic: (1) It acts powerfully; (2) It acts rapidly; (3) It is very simple and manageable; (4) It is easy of application; (5) It does not tend to deliquesce or spread; (6) It is perfectly safe; (7) It is efficacious. On the latter point he speaks with some hesitation, but says he has seen very remarkable results from its use. If I may judge from my limited experience he might have added: (8) It causes much less pain than most of the agents of this class.

The case which I have reported is not calculated to make one an enthusiast on the subject of sulphate of zinc as a remedy for cancer, but I am satisfied that it has prolonged my patient's life and saved her much suffering, and I think the case worthy of record, in order to draw attention to a remedy which deserves a higher place than is generally accorded to it in works on surgery.

HOSPITAL NOTES.

PRESBYTERIAN HOSPITAL, PHILADELPHIA.

(Service of THOMAS B. REED, M.D.)

INJURIES OF THE SKULL.

(Reported by J. P. CROZER GRIFFITH, M.D., Resident Surgeon.)

Two very interesting cases of injuries of the head have recently been successfully treated at the Presbyterian Hospital.

Compound Comminuted Fracture of the Mastoid Bone.—J. McM., brakeman, aged twenty-three, was brought to the hospital early on the morning of November 3, 1881. While on the top of a freight-car, he had been struck, it is supposed, by a bridge, and had lost a great amount of blood, which had saturated his clothing, and spread over the roof of the car. At the time of admission he was suffering from severe shock, and from concussion of the brain. Examination revealed a large gash completely through the left auricle, and extending backwards and horizontally over the position of the mastoid process. The tendon of the sterno-cleido-mastoid muscle was torn asunder, the auditory canal laid open and communicating with the rest of the wound, and the mastoid process broken into several pieces, the largest of which had been driven deeply inward towards the bottom of the wound.

Cerebral irritation soon developed, and the patient became so unruly that ether was administered, and the wound in the auricle closed by sutures, that in the neck being left open.

Liquid diet and ice to the head were ordered. All through the 3d and 4th days of November the patient lay in a totally unconscious condition, incapable of being roused, and with eyes shut, and snoring respiration. By the 5th it was possible to awake him, and his respiration was natural; and by the 8th of the month he was perfectly conscious and rational, but suffering from very severe headache, entire loss of appetite, and complete left-sided facial palsy.

A dangerous typhoid condition, lasting some time, now developed. This, however, yielded to treatment, and by the 1st of December he was able to leave his bed, although continuous and exceedingly severe headache still persisted. He constantly inclined his head to the right, and supported it by his hand, as the muscle of the left side was, of course, unable to sustain it. His temperature up to this time, and through his whole recovery, was but slightly elevated, reaching 100° but once.

Meanwhile the wound, which measured about two and a half inches in length, and one inch in breadth, and which extended inwardly fully two inches, had been suppurating freely, and filling up by granulations. The auditory canal opened directly into it, and no tympanic membrane could be discovered; and the patient was unable to hear a watch even when applied to the auricle.

Several small pieces of bone were at different times removed, yet the large fragment at the bottom of the wound was still firmly held by granulations. An aural examination, made early in December by Dr. Burnett, the aurist of the hospital, showed that hearing was still preserved, but that the fragment of bone was obstructing the passage of sound through the auditory canal. Subsequently, this piece, measuring about three-eighths of an inch in length, and one-quarter of an inch in breadth and thickness, was removed, and from that time the patient's headaches, which had been gradually becoming less severe, very markedly diminished both in number and degree.

A partition wall now commenced forming in the wound, partially shutting off an auditory canal, but leaving so narrow an opening internally that the condition of the tympanic membrane could not be seen. It was evident, however, that a perforation existed, since air could be forced from the nose through the wound.

On January 2, 1882, he was discharged from the hospital. He was seen again about the middle of February. His health during the interim had been excellent, and there had been no headache. The wound had healed almost entirely, and the new auditory canal was almost completely formed; but its internal opening had become exceedingly small, and it was utterly impossible to see the tympanic membrane. He could not, at

this time, hear a watch even when pressed against the auricle, although he stated that during the preceding month he had been able to hear it at a few inches' distance. The sterno-cleido-mastoid had reunited with the skull, and he was able to hold his head erect. The facial palsy was as marked as at first.

Probable Fracture at the Base of the Skull.—J. A. S., aged twenty-four, fell from a locomotive, not in motion, a distance of five feet, striking his head over the left parietal bone. He walked to the hospital, though experiencing much faintness, nausea, and vomiting upon the way. There had been considerable hæmorrhage from the nose and left ear. He reached the hospital early on the morning of December 31, 1881. The bleeding from the nose had ceased, but that from the ear still slightly continued. He complained of being a little cold and sick, and appeared to be laboring under great torpor and confusion of mind. He was put to bed, and dry cold to the head, low diet, and a purge ordered. Vomiting, sometimes of the blood which had been swallowed, was frequent during the day, and the patient lay perfectly quiet, and with eyes shut, except when a question, spoken in a loud voice, would secure a response of few words. His condition continued just the same for several days; great mental torpor, respiration quiet, pulse about 50, and, on one occasion, only 47 beats in the minute, temperature ranging from 99° to 100°, discharge from the ear more and more watery, and finally, almost colorless and very profuse, wetting the dressing of absorbent cotton and soaking completely through the pillow beneath. Unfortunately, no chemical examination was made of the fluid, and no means taken to collect and measure it; but certainly, in all, there were not less than one and a half pints discharged, a quantity far too great to be produced by exuded serum. Probably the amount was even greater than the estimate given. Under the microscope nothing was revealed but a clear, colorless fluid, containing a very few blood corpuscles floating in the field of view. The presence of blood disks is easily understood from the fact that hæmorrhage had at first taken place in the auditory canal. Upon the 3d of January he was somewhat better, now lying with eyes open, but still perfectly quiet, and never speaking unless addressed. The pulse was now about 60 beats in the minute. His condition from this time steadily improved. By the 6th of the month the discharge from the ear had almost ceased, the pulse ranged from 65 to 70 in the minute, and the mental torpor was less; but he suffered from severe headache. On January 11 he was permitted to leave his bed. Headache was still very severe, and usually situated over the right temple. He still seemed stupid, appeared to think slowly, and when addressed roused himself as though from sleep. In the left ear he was markedly deaf, and could hear a watch only at a distance of two and a half inches. Examination showed that both membrana tympani were whiter than normal, while that of the left ear exhibited at one point a reddish spot, probably a cicatrix. The patient stated that he had been slightly deaf previous to his injury, but that it had never caused him any inconvenience, as at the present. On January 15 he was discharged, cured. His headaches were at this time very slight, and his pulse was, pretty constantly, 84 beats in the minute.

Remarks.—This case is especially interesting in that it is almost certainly one of fracture of the base of the skull, and that so complete a recovery followed. Certainly the patient showed two of the prominent symptoms of this injury, viz., profuse watery discharge from the ear, and a very slow pulse.

MEDICAL PROGRESS.

Intestinal Digestion.—Dr. Robert Meade Smith, the Demonstrator of Physiology in the University of Pennsylvania, has been engaged for some time past in the study of intestinal digestion. Our entire ignorance of any positive knowledge of the composition of the secretion of the small intestine, and of its action on the different food-stuffs, depends upon the failure of all attempts as yet to secure a pure secretion, free from pancreatic or biliary juice, and yet keep the intestine in its normal condition. The method of Thiry, the best process yet described, of resecting a loop of intestine, one end of which is closed, and the other fastened to the opening in the abdominal walls, while the continuity of the intestine is restored by again uniting the divided canal, has entirely failed to give any reliable results; for, although the isolated loop still has its circulation maintained, the necessary removal of the mucous membrane of the part experimented on from contact with the other intestinal juices and contents of the intestine, and its consequently enforced functional inactivity, renders it impossible to regard its secretions as at all representing a normal intestinal juice.

The method which Dr. Smith has found to give the most reliable results, is to establish a fistula in the duodenum, about six inches below the pancreatic duct, using a tube similar to the ordinary Bernard gastric canula, the inner plate of which is rolled on itself, so as to form a section of a tube, and thus adapt itself to the curved anterior walls of the intestine; the stitches which fasten the tube in the gut also serve to unite the canal to the abdominal walls and to close the wound in the latter. Dogs subjected to this operation usually do well, and in from two to three weeks are entirely recovered from the effects of the operation. When it is desired to collect the intestinal secretion, the animal is allowed to fast for thirty-six hours, so as to remove all *débris* of food from the intestine, and a thin rubber bulb, with a narrow tube, is then passed in through the tube into the intestinal canal, and carried just below the opening of the pancreatic duct. The bulb is then slowly distended with warm water, and the intestine thus entirely occluded, and all fluids prevented from passing from above downwards. Another similar bulb is then passed down the intestine for about twelve inches, and distended, and the portion of the intestine between the two, communicating with the canula, washed out with distilled water. The dog is then supported by straps around his body, which only restrain him when he attempts to move, and the secretion which flows from the tube is caught in a funnel and collected. In this manner, from twenty to forty cubic centimetres of intestinal juice, absolutely free from pancreatic juice and bile, as shown by the chlorine and Gmelin's tests, can be collected in an hour, while by Thiry's method only a few drops are to be obtained.

Dr. Smith finds that intestinal juice thus collected has an invariably alkaline reaction, with a specific gravity of 1018, is pale yellow in color, and filters with difficulty. Analysis shows that in one hundred parts of the filtered juice there are:

Water,	98.860001
Albumen, Ferments, Mucin,	.547560
Chlorides of Sodium, Magnesium, and Potassium, Sulphates and Carbonates of Sodium and Potassium, Carbonate of Calcium,	.592410
	99.999971

Two ferments have been isolated, one converting starch into sugar, and the other changing cane-sugar into grape-sugar.

Dr. Smith is making a thorough study of the chemical composition of the secretion thus collected, and the digestive action of its ferments, and his results promise to be most interesting and valuable, and to throw some positive information on this obscure subject.—*Penn Monthly*, April, 1882.

SALICYLATE OF SODA IN ACUTE TONSILLITIS.—From the close connection which has long been recognized between rheumatism and certain forms of tonsillitis, Dr. JOS. W. HUNT has been induced to try this remedy, and the results have been most favorable. In his hands it has acted almost as a specific in acute tonsillitis. Provided that there is no actual formation of pus, most decided relief is afforded in about twenty-four hours—*i. e.*, the swelling and angry-looking condition of the tonsils are reduced, pain diminished, and the patient can swallow with comfort, while the temperature becomes normal, and the pulse is reduced in frequency and improved in quality. Since he has used this drug he has had no single case go on to suppuration; nay, more, where it has appeared, from the state of the tonsils and the brawny and infiltrated condition of neighboring parts, that suppuration must ensue, it has been arrested by this treatment. The doses used have been fifteen grains every four hours for an adult, and about ten grains every four hours for a child. He has met with no unpleasant symptoms from its use, beyond a little tinnitus and occasional vertigo. When the brunt of the attack has fallen upon one tonsil, a relapse in the other, when the salicylate has been discontinued, is not uncommon, but this speedily yields to the same treatment. One or two medical friends, who have used the salicylate at his suggestion, have expressed themselves in equally favorable terms.—*Lancet*, March 11, 1882.

PATHOLOGY OF PNEUMONIA.—Pathologists have long been struck with the points of close analogy between croupous pneumonia and acute specific diseases, and especially with the resemblances between its clinical history and that of erysipelas. The dependence of the latter disease on a microscopic organism was demonstrated by v. Recklinghausen and Lukomsky, and has been corroborated by many subsequent observers, especially by Koch. Several investigators have endeavored to find, in cases of acute pneumonia, a similar pathogenic organism. Klebs discovered spherical monads in the contents of the bronchial tubes and in the fluid of the cerebral ventricles; Eberth has described ellipsoidal micrococci in the infiltrated lung and inflamed pleura and pia mater in a case of pneumonia complicated with meningitis; while Koch observed similar organisms in the lungs and kidneys in a case of pneumonia following relapsing fever. The most recent investigations on this point have been carried on by Friedländer, of Berlin, who has discovered organisms in every one of eight cases which he has carefully investigated. The search was made in the fibrinous effusion in the bronchial tubes, and in sections of the lung tissue and inflamed pleura, hardened in alcohol. The micro-organisms found were almost constantly of similar size and form, ellipsoidal micrococci, a micro-millimetre in length and one-third less in breadth. Spherical organisms were also seen, some apparently really such, others evidently the oval bodies viewed endways. They were uniform in substance, slightly refracting, and colored deeply by the aniline reagents. Their usual arrangement was in pairs, but in some cases they formed long chains, and in the bronchial exudation they were spread out in a film. An aggregation in colonies was seen only in the interior of the lymphatic vessels. Their abundance within the alveoli was remarkable; thousands were counted within a single air-cell in the stage of red hepatization. As a rule they could not be seen within the walls of the alveoli, bronchi, or vessels, but in one case numbers were observed in the lymph-spaces of the interstitial connective tissue, which was œdematous, and in the lymphatic vessels, which presented swelling of the endothelium, within the cells of which the organisms were also seen. This lymphatic infiltration has, Friedländer believes, a special significance. The micrococci in the bronchial exudation may possibly be connected merely with changes in the necrotic material, but this explanation can scarcely hold good of their presence in the fibrinous contents of the alveoli; since the lymphatic changes, in the case alluded to, demonstrate that the micrococci may pass into the current of the circulation, and develop in the living tissues. The changed lymphatics were actually visible to the naked eye as white threads. Although the alteration was found in one case only, this was a typical example of the so-called croupous pneumonia. Moreover, the organisms were found in the tissue of the inflamed pleura in almost every case; abundantly in the œdematous tissue of old adhesions, and their presence here has the same significance as the lymphatic infiltration. Are these organisms the cause of the pneumonia? To this question, Friedländer observes, anatomical investigation cannot alone give a certain answer. The theory is favored by the above-mentioned consideration and the analogy between pneumonia and some other acute infectious diseases. Its frequent occurrence as a result of exposure to cold constitutes, however, a difficulty in accepting this theory of its causation, which is scarcely lessened by an hypothesis advanced by Friedländer, that the organism may undergo certain stages of its development at a low temperature. It would seem more probable that blood changes induced by cold may set up local inflammation, in which the organism finds conditions favorable for its development and that its presence may thus be a secondary, and not a primary, element in the pathology of the disease.—*Lancet*, March 4, 1882.

THE CONTAGION OF TYPHOID FEVER.—Dr. ARNOULD, of Lille, discusses, in the *Bulletin Médical du Nord*, August, 1881, a small epidemic of typhoid fever which broke out in his wards in the military hospital at Lille. He has used the opportunity of studying closely the conditions of transmission of this disease. Medical opinion ranks, he observes, typhoid fever among the infectious diseases, and its development requires the previous existence of a focus. Direct contact with the patient as a cause of contagion is not accepted; and Van Gietl has gone so far as to say that "a typhoid patient, naked and washed, would not injure any one." The facts observed by Dr. Arnould, the rapid diffusion of the disease through a series of patients in the same hospital-ward, without the existence of any epidemic in the town, seem to him to contradict this too positive assertion. He thinks, in certain cases, that typhoid fever may be really contagious. As to the question whether the contagion is lessened or increased, or the soil more or less favorable for its reception, Dr. Arnould does not pronounce a decided opinion. He inclines, however, towards the latter hypothesis, and remarks upon the deplorable sanitary condition of the hospital in question. In such a medium, the creation of a focus of disease may be very rapid, and the apparent contagion may well be only an infection of special activity. To English hygienists, it will seem surprising that, on such slender grounds and under such circumstances, so excellent a sanitary authority as Dr. Arnould had not proceeded to eliminate the ordinary causes of typhoid fever before proceeding to invent new ones. We may remind him that, out of 16,000 or 17,000 cases of typhoid fever admitted into the London Fever Hospital, the disease has never been known to spread from one patient

to another; and this is apparently due to the care taken to disinfect and remove the typhoid stools, which are thoroughly recognized as the general seat of infection. In the French hospitals, with the filthy arrangements commonly prevailing with the latrines, the dirty habits of the patients, the want of personal cleanliness on their part, and also on the part of the nurses and assistants, anything is possible in the way of filthy contamination; and, until these facts are perfectly understood by French hospital authorities, little attention will be paid to the probable fact, that typhoid fever in France is not conveyed by any other form of infection than that by which it is spread in England or other countries. The contagiousness of typhoid fever by other sources, however, is not a thing to be set aside as impossible, or as unworthy of investigation; but it is certainly necessary first to eliminate the ordinary causes of infection.—*British Med. Journ.*, March 11, 1882.

Exophthalmic Goitre.—In a short monograph on the pathology and treatment of exophthalmic goître, M. Noel Guéneau de Mussy describes four cases of this disease, which have recently come under his notice. Two of these occurred in males and two in females. In all four the ordinary symptoms were observed, while two were conspicuous for enlargement of the tracheobronchial glands; two for distinct choreiform movements, and two for muscular weakness and trembling of the limbs. In two there were cardiac complications, and in one marked pigmentation of the face. M. Guéneau de Mussy is an advocate of the theory of defect of innervation. He lays great stress upon the enlargement of the thoracic glands about the bronchi and trachea, and in the immediate vicinity of the pneumogastric nerve. He lays down a few diagnostic rules for the determination of such enlargements, for he considers that they may give rise to irritation of the pneumogastric nerve by contiguity, and so form the initial factor of the phenomena of this disease. He, however, throws this out only as a hypothesis, but one which is strongly supported by facts. He does not deny that this disease may have other sources of origin, such, for example, as a peripheral one, similar to a sclerosis of the posterior cornua from a lesion of a nerve. In support of the defect of innervation theory, he further adduces the pigmentation of the face, which occurred in one case, and sees in the irritation of the pneumogastric nerve a plausible explanation. He then goes on to strengthen his argument by reference to Dr. Greenhow's remarks on bronzing of the skin, in an address on Addison's disease, read before the International Medical Congress. M. de Mussy seems to have faith in the freshly prepared tincture of iodine, and in the natural waters of Dongues and La Bourboule; but it is proper to remark that the treatment is given of only two cases, one of which died, and the other made a brilliant recovery.—*British Med. Journ.*, March 11, 1882.

The Temperature of Inspired Air.—Dr. Fleming has made some experiments on dogs, to determine the amount of heating which air undergoes in the upper part of the air passages during inspiration, with reference to the after-treatment of tracheotomy. He finds that the air is heated to within 20° Fahr. of the animal's temperature, whatever the initial temperature may be, so that in dealing with human beings a temperature of nearly 80° should be the best. To keep the patient in an atmosphere of 80° would obviously be injurious. He therefore suggests, that after tracheotomy, air, heated to a temperature of 80°, and saturated with moisture, should be conveyed by a tube from a suitable apparatus to the inner tracheotomy tube. This can conveniently be arranged with some such apparatus as the following, which he has devised for the purpose. It consists of a tin vessel filled up to a small window with water, and having a tight-fitting lid, through which pass two tin tubes, and in which are also two apertures to receive the thermometer and the gas regulator. The water is kept at a constant temperature by the gas regulator and the Bunsen burner. The opening is connected by a piece of India-rubber tubing with the internal tracheal canula, and care is taken that the tube is so tied, either to the person of the patient or a suitable support, that no traction occurs. A short distance from the tracheal canula a T piece is introduced, with two valves, one preventing the air passing back into the chamber during expiration, the other permitting its escape, but preventing entrance of air by this channel during inspiration. By this simple arrangement the air supplied to a patient after tracheotomy may be kept for an indefinite time at the temperature and moisture desired, and he believes comfort will be given to the patient, and we will avoid the pulmonary complications which so frequently follow tracheotomy and discredit the operation by doing away with the benefits which have been derived from it.—*Glasgow Med. Journ.*, March, 1882.

Antidote for Strychnine.—Messrs. Greville Williams and Waters (*Proceedings of the Royal Society*, xxxi., p. 192), have discovered an antidote for strychnine in the organic base first prepared by the former, by distilling cinchonine with caustic potash, and to which he assigned the name β lutidine. Having ascertained, by experiments upon frogs, that β lutidine causes a distinct increase in the tonicity of both cardiac and voluntary muscular tissues; also retardation of the heart's beat; that it arrests the inhibitory power of the vagus; and that, by its action upon the nerve-cells of the spinal cord, it, in the first place, lengthens the time of reflex action, and then arrests that function; they proceeded to test its direct counter-action to strychnine. The brains of frogs were destroyed in the usual way. An animal was then treated with β lutidine till reflex action disappeared; when the subsequent administration of strychnine was not followed by the usual results. To another frog, strychnine was given till strychnine tetanus was produced, when it was found that the subsequent administration of lutidine caused the tetanus to pass off. The almost simultaneous administration of the two bases was not followed by tetanus. The results of these experiments are most promising; and it is to be hoped that the fanaticism of the antivivisecting portion of the community will not be influential to prevent the use of β lutidine in practical toxicology. We hope to hear that the base has been used for experiments on animals poisoned by strychnine, and whose brains have not been destroyed.—*British Med. Journ.*, March 11, 1882.

Epidemic Pneumonia.—The occurrence of forty-two cases of pneumonia in a small German village of seven hundred inhabitants unquestionably merits the designation of "epidemic," given to it by Penkert, the narrator of the outbreak. The first case occurred on March 11, and the last on May 14. The mode of development and progress of the cases give considerable probability to the theory of its miasmatic origin. The first twelve cases were in children who attended the same school. The village consists of a single street, and at its lowest extremity is the school building, separated from a new cemetery only by a piece of low ground, in which is a pool. For some days before the outbreak the wind blew from the direction of the cemetery and pool to the schoolhouse, and the ground water was so high that most of the cellars in the lowest part of the village were flooded, and there was a sudden rise of temperature. It is conjectured that the saturated soil of the burial-ground furnished germs which were carried by the wind to the

schoolhouse. It is noteworthy that the first cases occurred only among children occupying rooms facing this cemetery; and that, from the direction of the wind, no other house in the village would be exposed. Of the other cases, in twenty-eight there was a strong suspicion of direct contagion. After the commencement of the Easter holidays no other children attending the school were attacked. The mortality was low, only two of the whole number of cases being fatal. The duration of the disease never exceeded three days. The part of the lung affected was, in sixteen cases, the right lower lobe, in fifteen the left lower lobe, and in one case the apex of the left lung. In every case the onset was sudden, and the symptoms in other respects such as characterize acute croupous pneumonia.

A recrudescence of epidemic pneumonia in a prison has afforded Kühn the opportunity of ascertaining by experiment whether this form is transmissible to animals. He therefore introduced beneath the skin of rabbits portions of recent pneumonic sputa, and obtained remarkable results. Of seventeen rabbits employed, five died within forty-eight hours after the inoculation, without any elevation of temperature; six others were attacked with high fever, ending with a crisis on the fifth or seventh day. Some died, the others were killed, and in all there were found foci of pneumonic infiltration and various other changes: pleurisy, pericarditis, enlargement of the spleen, swelling of Peyer's patches, parenchymatous nephritis, injection of the pia mater, œdema of the brain. The lesions thus resemble those of acute septicæmia very closely. In two of the rabbits, however, besides the lesions already described, recent tubercles were found in the lung.—*Lancet*, Feb. 25, 1882.

QUINIA. — Experiments by CHIRONE, of Messina, have shown that quinia can lessen sensibility, although it is incapable of causing actual anæsthesia; nor does it, even in large doses, abolish reflex action. The stupefying effect occurs only when the quantity taken approaches the toxic limit. The first sensation to be lessened is that of touch, then that of pain, and lastly, sensibility to heat. The diminution often commences in the anterior part of the body before the posterior. Deafness and blindness are often produced in dogs, as in men, by large doses. Slight diminution of tactile sensibility may be produced in man by a dose of fifteen grains repeated after a short interval. If quinia is injected into the arteries, local insensibility is produced in the part to which it is conveyed; and all functional activity is suspended in this region. Very large doses cause general convulsions. No differences in the precise physiological action are to be observed between quinia, quinidia, and cinchonidia; but the latter appears to be the most toxic.—*Lancet*, Feb. 25, 1882.

DEATH AFTER OVARIOTOMY, DUE TO PREVIOUS TAPPING.—Mr. LAWSON TAIT read a paper on this subject at the meeting of the Midland Medical Society, held Feb. 1. He drew attention to the fact that amongst the last hundred ovariotomies (for cystoma) which he had performed, there had been only three deaths. In all, the deaths had been due to the formation of a firm white clot, which started from the point of ligature of the pedicle, and slowly traversed the venous system till it reached the heart, death ensuing in from thirty to forty hours after operation. The symptoms which preceded death were swelling in the legs, rapid rise of pulse, and its disappearance from the extremities some time before death, breathlessness, ending in suffocation and slight delirium. He had seen several such deaths, but not one in a patient who had not been previously tapped. His explanation was that repeated tappings deprive the blood of some element or elements included in the infinite variety of albuminous substances found in ovarian cysts, the deficiency of which predisposed to coagulation of the blood. The author thought that no case of ovarian tumor should be tapped till previous abdominal section had shown that it could not be removed. He believed that if this rule were followed the mortality might be reduced to less than one per cent., if cases were operated on early.—*Med. Times and Gaz.*, March 11, 1882.

CAUSES MODIFYING THE INFECTIVITY OF SCARLATINA.—At the meeting of the Medical Officers of Health Society, on February 17, Dr. ALFRED CARPENTER read a paper entitled "Some of the Causes which Increase or Modify the Infectivity of Scarlatina," of which the following is an abstract. He considered that a long period of quarantine, such as eight or ten weeks, and sometimes four months, was to be deprecated in the case of children recovering from scarlatina; he himself for many years had isolated cases for a fortnight, and in some instances for a week only, after the departure of the fever, and he had never heard of any evil result accruing from such a course. He next mentioned various cases in large schools which served to explain his views as to the cause of scarlatina. The first outbreak of which Dr. Carpenter made mention was, in his opinion, entirely caused by a cesspool, situated in the school-yard, which was the recipient of washings from a slaughter-house, and once a week, at least, the aerial contents of this cesspool were displaced into the closets of the boys, situated in close proximity to it. As soon as this cesspool was emptied and the drains properly directed into the sewer, scarlatina ceased to appear in the school. Want of proper ventilation in the soil-pipe and drains belonging to the building caused an outbreak of scarlatina in another school, the drains being in direct communication with the main sewer of the district, and scarlatina being also at that time very prevalent in the neighborhood. Dr. Carpenter believed that the nature of the blood into which the poison was received aided more materially in increasing the mortality from scarlatina than the character of the poison itself, and, in support of this theory, he instanced two outbreaks of this disease, in one of which the mortality had been excessive, fourteen persons having died out of seventy-five who were attacked, while in the other outbreak only three deaths occurred, though the total number of cases was one hundred and eight. Dr. Carpenter attributed this difference in the mortality to the surroundings of the children; in the one instance, the conditions were on the whole healthy, but in the other the children were exposed for a much longer period to an impure atmosphere, and were badly cared for at home. The cause of the two outbreaks was similar in character; the excreta of the first case of scarlatina in each school passed down unventilated drains, which communicated directly either with classrooms inhabited by the children or with closets used by them. In conclusion, Dr. Carpenter said that he believed scarlatina more often arose from sewage emanations or sewage contaminated with scarlatina germs than from personal contact. He considered that in many cases where the cause of the disease had not been discovered, it might have been found, on careful investigation, to proceed from some accidental inhalation of sewer air, and that persons who were constantly exposed to such an atmosphere were liable to more severe attacks of scarlatina and diphtheria than those who inhaled the poison for a short period. Dr. Carpenter also suggested that the discharge of hot water and waste from steam-engines into the sewers was a source of danger in producing scarlatina and diphtheria. In the discussion which followed, the President, Dr. Churchill, Dr. Child, Mr. Jacob, Dr. Kelly, and Mr. Shirley Murphy took part.—*Lancet*, March 11, 1882.

THE MEDICAL NEWS.

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THE TOTAL EXTIRPATION OF THE UTERUS THROUGH THE VAGINA.

THE success attending the removal of a carcinomatous uterus through the vagina reported by Dr. Fenger and by Dr. Cushing, in the *American Journal of the Medical Sciences* for the current year, will tend to direct the attention of American gynecologists, with more interest than has yet been displayed, to the merits of this practically new operation. After a successful operation by Récamier, there is a desuetude of fifty years, until in 1879, Czerny revived it by a successful case. In its practical form the operation may be said to belong to Schroeder, as he, so late as 1881, partly demonstrated its limits of usefulness and the factors of its safety.

The unfortunate results attending Freund's operation have naturally turned attention to the technically more difficult removal of the uterus through the vagina. The operation must not be confounded with the amputation of the uterus through the supra-vaginal neck by laparotomy; for, as Schroeder has shown, the results become more uncertain the more deeply we have to penetrate into the small pelvis from above. Here will probably be drawn the line that determines whether the objective point of the operation is to be approached through the abdomen above or below from the vagina. In its practical relations the subject must be studied from a higher level than mere statistics. The fact that 69 per cent. of those operated upon have recovered, while many steps in the operation are confessedly open to improvement, is not so significant of the character of the procedure as the statement of Schroeder that there was no collapse. Two of his patients lost so much blood that the pulse could no longer be felt,—a condition that affords but a small hope for the recovery of the subject in laparotomy,—but no collapse followed. The subjects of his operations recovered like puerperæ after considerable hemorrhage, and an easy convalescence was the rule. The success attending excision of the supra-vaginal neck would seem to point to the vagina as the natural channel for all surgical measures that involve the complete severance of the vaginal connections of the uterus.

There is, however, another side to the picture. Some of the steps in the manipulation are of extreme difficulty. The uterus must be of the size that will allow of inversion of the fundus into the vagina. If, from the size of the organ, this is impossible, the operation becomes one of great difficulty when the ligation and division of the broad ligaments are attempted. Under the most favorable conditions this part is not easy to perform. The necessity to invert the uterus is not absolute, since Baum omits this and proceeds after the manner of Billroth. It is safe to say, however, that Schroeder is right, and that a uterus so large that it cannot be readily manipulated constitutes a contra-indication. More important, however, than any technical difficulties in the way of its performance is the very conservative view English-speaking gynecologists take of all radical surgical interference with malignant disease. The period is a brief one in the history of a case of carcinoma during which its limits are confined to the uterine body or supra-vaginal neck. Tissue infiltrations of near parts may not be discovered, but whether extensive infiltrations or mere nodes, they absolutely preclude any interference of such a nature as to jeopardize a life already hopelessly involved. In a carcinoma of the uterine body laparotomy, with amputation at the os internum, offers a safer and more easily managed substitute; while, for the various forms of malignant degeneration of the neck, supra-vaginal excision gives promise of brilliant results. In the latter, Schroeder has experimented in 28 cases, with only two deaths. The conjunction of local conditions, by which the extirpation of the uterus through the vagina is clearly indicated to the exclusion of any other procedure, must, from the nature of things, be a rare event in pelvic surgery; but in view of such an event, it is not undue praise to say that at present we have no substitute for it except the unsatisfactory method of Freund.

What the ultimate saving of human life may be, since the operation is designed to cope only with malignant disease, can scarcely enter as a factor into the question of its selection. If we are to judge of this by the present status of amputation of the breast for scirrhus, the problem of its utility may

never be solved. We have however the satisfaction of knowing that in the present activity of pelvic surgery this operation will rapidly complete its history, and we have no doubt that, notwithstanding the conservative tone of American surgery, we shall contribute an abundant material to it. It does not seem to us over-sanguine to hope that we have in this operation one that does not offer exceptional success, but that may be regarded as a practical surgical resource that will be as clearly defined in its limits of usefulness and as well established in its technical procedure as ovariotomy.

NITRO-GLYCERINE.

One of the most important additions recently made to practical therapeutics is *nitro-glycerine*. This agent contains enormous energy stored up in its constituents, and would therefore seem, *a priori*, to be possessed of intense physiological activity. Investigations have confirmed this supposition. The form in which it is made available for administration is the centesimal solution: one minim of nitro-glycerine dissolved in 100 minims of alcohol. As there are remarkable variations in the susceptibility of persons to the action of this agent, it is necessary to begin with a minimum dose, and increase gradually until some physiological disturbances occur. Some persons experience effects from a single minim of the centesimal solution. Beginning with a drop of this solution three times a day, a drop should be added every day until the desired effect be produced. When the person taking it is under the eye of the physician, a much more rapid increase of the dose may be allowed. Some persons are able to take a minim of pure nitro-glycerine, but such insusceptibility is comparatively rare.

The physiological effects of nitro-glycerine are eminently characteristic, but they accord with those of the nitrites in general—with amyl-nitrite, nitrite of soda, etc. When a sufficient dose is swallowed, in a few minutes the face flushes, the heart bounds, and continues in rapid, even tumultuous action; the superficial arteries pulsate strongly; the head aches, with a tense, band-like feeling about the forehead, and singing in the ears, vertigo, dimness of vision, confusion of mind, and even suspension of the cerebral functions or unconsciousness may result. According to Dr. Murrell, who has himself experienced the action to this extent, unconsciousness may be produced without detriment, and be quickly recovered from. The effects are clearly referrible to paresis of the vaso-motor system, and of the pneumogastric, whence increased action of the heart and dilatation of the arterioles follow. The hydrostatic effect of this change in the vascular tension, and in the distribution of the blood, must be obvious to all. Without further comment on the physiological actions, we now lay before our readers the results of clinical experience.

The applications of nitro-glycerine to the treatment of disease are directly deducible from the physiological study—another proof, if more were needed, of the value of the physiological method. A remedy which so depresses the vascular tension must be useful in conditions of disease in which the vascular tension is abnormally exalted. A capital illustration of this state is afforded in the hypertrophy of the heart and of the muscular layer of the arterioles, with a resulting high arterial tension, belonging to chronic Bright's disease. It has even been maintained that this condition of the circulatory system is the first step in the pathological changes. And, as has recently been shown by DaCosta and Longstreth, very important structural alterations occur in the solar ganglion and semilunar plexus. Whether these pathological conditions precede, or succeed, to the renal changes is yet a disputed question, but it is evident that the sympathetic system is concerned in them in some way. This fact has induced the use of nitro-glycerine in the chronic form of albuminuria, and it appears to have been distinctly beneficial. It is given in sufficient quantity to antagonize the high tension of the arterial system, and the state of lessened tension must be maintained long enough to have an effect on the kidney textures. If further experience shall confirm the observations already made, we have a valuable addition to our resources.

In *angina pectoris*, a state of exalted arterial tension, in a considerable proportion of cases, is an important factor. Observing this, and remembering the effect of amyl-nitrite on arterial tension, Brunton concluded that this agent would afford relief in *angina pectoris*. His theory was amply confirmed on trial. Although nitro-glycerine cannot be utilized in the treatment of the paroxysm of angina pectoris, its methodical administration during the interval may prevent the attacks.

The application of nitro-glycerine to the treatment of certain cardiac diseases is a most important therapeutical expedient. When the walls of the heart are weakened by myocarditis, or by fatty degeneration, any cause suddenly increasing the vascular tension may arrest the movements of the organ. Great embarrassment of breathing, pulmonary congestion and œdema, and general dropsy may result from the weakness of the heart's walls, and these difficulties are enhanced by a condition of elevated tension of the arteries. In such cases nitro-glycerine is found to do much better than digitalis, which, on the other hand, is more efficient when the vascular tension is low.

One of the forms of *migraine*, or sick-headache, is that characterized by contraction of the arterioles,

and consequent pallor of the face and lips. This is speedily relieved by nitro-glycerine. Also, the cases of neuralgia associated with spasm of the arterioles are similarly benefited. There is, probably, a form of *dysmenorrhœa* in which the same condition of the vascular system exists, and in which the same kind of remedy is found to give relief. We might enumerate many maladies, differing in various ways, but agreeing in respect to the high state of the arterial tension, improved or cured by nitro-glycerine. There is, therefore, a wide field of usefulness for the new agent; and its applications to the treatment of disease, based on its physiological actions, are clearly defined, and have an exactness belonging only to mathematical science.

AMERICAN EXPERTS—ENGLISH JURISPRUDENCE.

An American physician, having any acquaintance with the methods which obtain in the conduct of criminal cases before our American courts, could hardly fail to be struck with the weak defence of the prisoner Lamson, in its medical aspects. At the present time, the subject of the chemical reactions and the physiological effects of the vegetable alkaloids found in the human body after death from one of them must be involved in much doubt, owing to the discovery of *ptomaines*, alkaloidal substances, "discovered and named by Selmi, generated during decay, and closely resembling the vegetable alkaloids, not only in their physiological effects, but also in their chemical reactions." Ptomaines, says Dr. Stevenson in the *London Medical Record*, Nov. 15, 1881, are usually produced in substances which, after brief exposure, have been excluded from access of air, as in buried corpses, in the internal viscera of the living, sausages, and canned foods; but Spica has obtained no less than four ptomaines from the fluid of peritonitis, taken from a living patient. It appears, also, that "ptomaines present, in general, the leading properties, physical and chemical, of the vegetable alkaloids, as veratria, morphia, and codeia, and may readily be confounded with them." Such is the statement of Dr. Thomas Stevenson, the toxicologist to whose researches Dr. Lamson chiefly owes his conviction. But the counsel for this unfortunate wretch made no attempt to put before the jury these remarkable statements from the man whose pitiless recital of chemical facts took away any chance for acquittal, which, in the absence of such testimony, might have been possible.

If this case had occurred before any American tribunal, the court-room and the papers would have been filled with the history and properties of ptomaines. If the counsel for the defence had been ignorant of them, "experts" would have hastened to fill him with knowledge. Whilst we may admire the superior dignity of the English method, we can hardly commend the knowledge or wisdom of the barrister who did not know, or failed to get, the information which might have seriously damaged the chemical testimony of the prosecution. If the attempt to get this important point before the jury had failed, at least public attention would be powerfully directed to the ptomaines, and their real place in toxicology might have been established.

ACONITIA OR ACONITINE.

The poisoning case, in which Dr. Lamson used the alkaloid aconitia, has directed professional attention anew to this powerful alkaloid. The term "powerful" is, however, only properly applicable to the Duquesnel, or to the English crystallized aconitia. The alkaloid of commerce, in the form of a white or a yellowish-white powder, is by no means equal to the crystallized alkaloid in physiological activity, and is, probably, composed of several principles. It contains *pseudaconitine* and the alkaloid newly rediscovered by Duquesnel, and called by him *napelline*, and it is also much subject to adulteration. In any medico-legal investigation it is of great importance to determine the form of aconitia which is to be the subject of inquiry.

The question of amorphous or crystallized aconitia has other practical bearings. We have heard recently of a *concours* for a hospital appointment, in which a candidate is supposed to have failed in consequence of an incorrect statement regarding the dose of aconitia. He was asked to give the dose of aconitia for a child one year of age, if we are correctly informed. He replied from $\frac{1}{200}$ grain to $\frac{1}{100}$ grain, and this reply was held to be incorrect. As Duquesnel's crystallized aconitia, the most active form of this alkaloid now known, has been given by members of the New York Therapeutical Society, in cases of tic douloureux, to adults, up to $\frac{1}{8}$ grain, we hold that the candidate's reply, if he referred to the common commercial article, was not very wide of the truth. Under present circumstances, in view of the uncertainty which now exists, any specimen of the alkaloid, the strength of which is not known, should be given in the minimum doses until its physiological powers are accurately gauged.

PRIVATE HOSPITALS FOR THE INSANE.

We have watched, with no little interest, the newspaper reports, the charges, the published correspondence, and the legal proceedings in the case of Miss Grant, lately a patient in Dr. Livingston's private hospital in this city. We do not propose to consider the question of Miss Grant's sanity, or of her medical or personal treatment. The coroner's inquest shows she died of congestion of the brain, and not of maltreatment, as had been asserted; and we dismiss, as utter nonsense, all the sensational de-

scriptions of the reporters as to her being "drenched with narcotics" by "brutally plunging the hypodermic needle into her quivering flesh."

There is a much higher point involved—one of the greatest possible importance to the medical profession and to the public, viz.: Is it wise, or indeed legal, to confine insane or partially insane patients in private hospitals or homes, without the sworn certificate of two physicians, as is required in the case of public hospitals?

Dr. Livingston claims, and says that the claim is founded upon the opinion of "eminent legal counsel," that he can admit whom he will to his hospital without any sworn certificate of insanity. As shown by Miss Grant's case, he restrains such patients of their liberty, and admits their friends or refuses them admission, as he deems best.

The abuses which such an interpretation of the law may render possible are so manifest and so serious, that we have no hesitation in saying that, if the law be as Dr. Livingston claims it is, it should be changed, and changed at once. The more public an insane hospital is, the less need for a certificate; the more private, and especially if euphemistically called a "home," rather than an "asylum," or a "hospital," the more necessary should such a certificate be.

To immure a sane man in such an institution as Kirkbride's, with its numerous attendants and visitors, and the consequent unavoidable publicity, is next to an impossibility. Yet all of us have seen cases—especially those involving family differences and questions of property, as in Miss Grant's case—in which the courts, though often unwisely, have opened the door to the asserted lunatic.

But what is to hinder any unprincipled Doctor from calling his house a "home," and shutting up therein half a dozen people asserted to be insane; or even more easily it may be a single patient, whose relatives may be refused admission, or may even be ignorant of his whereabouts, and therefore unable to obtain redress by the law, while the patient himself is hopelessly without means of escape either physical or legal? There is no inspection of the home save by its owner, whose self-interest is thoroughly enlisted against the patient; no provision for free access to the outside world through the mails; not even a board of managers to act as a check upon its iniquitous chief. There have been too many suspicions aroused of late years, unfounded though they generally are, as to what goes on behind the bars, to make it wise that entrance into such homes should be made easier and exit harder.

Nor do we believe it to be good law, for the statute makes no distinction. Call it hospital or call it home, unless I am sworn to be insane, who dare say me nay when I wish to lift the latch? Were any distinction made, as we have said, it should rather be the more stringent the more private the institution is, unless we wish to establish in this country the mad-houses Charles Reade exposed, and thus efficiently aided in their destruction.

We know that much may be said seemingly on the other side, and with force and justice. There are cases, and not a few, that are on the border line twixt reason and madness, persons who know so well their surroundings that the moment they are placed in a mad-house their little remnant of self-control vanishes and sanity is lost. In a private hospital, under sufficient restraint for treatment, and yet not barred and locked in along with recognized lunatics, they may often recover.

There are cases, and not a few, in which none of us is willing to give a sworn certificate of insanity, and yet eccentricity is passing into such extravagance as to threaten soon to get beyond the bounds of reason, often with suicidal possibilities, which every now and then ripen into shocking realities. For these cases just such a home is needed temporarily, and it will not seldom effect the happiest cure.

But we believe the many evil possibilities of such "homes" will far outweigh any advantages, great though they may be, in individual cases. Hence, we feel called upon to protest most earnestly against any interpretation of the law which makes such abuses possible.

So far as Miss Grant's case is concerned, though her family and financial relations have made it peculiar, there seems to be no reason to doubt her insanity or Dr. Livingston's integrity. It is the principle, not the man; the practice, not the patient, we have wished to consider.

It would to a great extent obviate many of the difficulties noted above if our laws were more like those of England. The certificate in this country simply states that the medical men believe the patient "to be insane." In England the certificate requires the facts on which this conclusion is based to be given, and distinguishes in two categories the facts observed by the examiner and those communicated to him by others. The two medical men must not be partners, must have no direct or indirect interest in the asylum in which the patient is placed, and their examinations must be made separately.

The law recognizes not only public hospitals and asylums, but also "Licensed Houses," some of which receive only males, others females; some only quiet and harmless cases, others are for certain specified cases only. But every one of these houses or "homes" is carefully inspected by the "Lord Chancellor's Visitors of Lunatics." Two physicians, for two years unconnected with any institution for lunatics, are appointed from to time. They must be in

actual practice when appointed, but relinquish it on accepting the position of Visitor. Their salaries are $7500 each, with travelling expenses and a pension after twenty years' service, having reached sixty years of age, or being permanently disabled.

Such "licensed houses" provide quiet and safe retreats for many a case that would in an ordinary hospital go from bad to worse. The restraints of the law seem to be ample to prevent flagrant abuses while giving scope for a useful function.

THE MEDICAL NEWS COMMISSION ON VACCINE FARMS.

The enormously increased demand for vaccine virus during the last few years, due to a wider popular appreciation of the value and safety of vaccination, and to the recognition by boards of health throughout the country of the necessity and economy of dispensing the virus at little or no cost, and in large quantities, has rendered all matters connected with its production exceedingly interesting, not only to the profession, but also to the general community.

In consequence, partly, of this greatly augmented demand necessitating a regular and abundant supply, and partly of the prejudices which have arisen against the use of humanized lymph, bovine virus has largely supplanted the latter, and, indeed, over extensive districts is employed to its almost entire exclusion.

The propagation, preservation, and delivery of this virus have, therefore, become a not unprofitable business, in which many individuals are engaged and much capital invested, and in which, as in other money-making occupations, the constant temptation exists to increase the gains by diminishing the labor and skill employed, or by diluting or adulterating the product. That this is not always successfully resisted is now well understood by every physician of experience, few of whom have not been annoyed by attempts at vaccination which were either entirely nugatory, or, still worse, were followed by erysipelas, cellulitis, or septicæmia.

In view of these well-known facts, and in the interest of both physicians and patients, it has been thought desirable to institute an examination into the condition and mode of conduct of some of the principal vaccine farms, in order that the results might afford reliable indications as to the character of the article supplied by them, any serious variation or deterioration in which may affect the health or lives of large numbers of people. To the practical importance of such information it is hardly necessary to call attention. To obtain it, skilled and competent inspection of each of the different establishments was required, as well as some collateral investigations by experts, all this, of course, involving the expenditure of considerable time, labor, and money, which, however, The Medical News has gladly undertaken for the benefit of its readers and of the community at large.

The first portion of the full report thus obtained will be found in our columns this week, and the report will be continued in our next issue.

We hear rumors of dissatisfaction with the action of the Sub-Committee on Publication of the U. S. Pharmacopœia, with respect to the award of the contract for publishing the work. It is said that the instructions of the Convention have been disregarded, and that the contract was not awarded to the best bidder. We presume that the matter will be investigated by the Committee on Revision before confirming the report of its sub-committee, and we reserve further comment until the necessity for it shall appear.

At a meeting, on the 5th inst., of the New York Medico-Legal Society, a report was presented by Surrogate Calvin, Chairman of the Law Committee, on the Coroner's Office. We notice with pleasure that it favored the abolition of the present system of coroner's juries at inquests, substituting medical examinations by legally authorized physicians, with subsequent action by the proper legal authorities, according to the practice now in successful operation in the State of Massachusetts.

We trust that the same matter will soon be taken up in Pennsylvania, and the excellent Massachusetts system adopted here. It has been tested long enough now to show that it is a substantial and positive improvement on the ancient, or rather the antiquated, system of "crowner's 'quest law," which we expect before long to see abolished.

SPECIAL ARTICLE.

THE MEDICAL NEWS COMMISSION ON THE MANAGEMENT OF VACCINE FARMS AND ON THE PROPAGATION OF BOVINE VIRUS.

The popular prejudice against vaccination with humanized virus—whether well founded or not we will not stop to inquire—has led to the employment of animal lymph almost exclusively. The widespread prevalence of small-pox in this country in 1871, '72, '73, and again during the last two or three years, has created an extraordinary demand for vaccine virus, to meet which, it is feared that many persons, possessing more enterprise than skill or knowledge, and with motives purely mercenary, have engaged in the business of producing so-called "bovine virus," which is wholly devoid of the power of inducing vaccinia. There appears to be no other way of accounting for the frequent failure and disappointment from the use of animal lymph, now so generally complained of by physicians. It is true, some allow-

ance must be made for the want of proper knowledge, on the part of many vaccinators, as to the peculiarities of dried animal lymph. It is said to be much less soluble than that from the human subject, requiring, therefore, greater care in its preparation before insertion. But in the hands of experienced and careful vaccinators, when due regard is paid to securing a perfect solution of the dried lymph, and its most skilful insertion, still failures, and even spurious results, are far more common than we are led to believe they should be if strictly pure and active animal lymph were used.

Concerning the susceptibility of the human subject to animal vaccine, Dr. Warlomont, Director of the State Vaccinal Institution at Brussels, writes,[1] "I answer, unhesitatingly, that it is equal, if not superior, to that for humanized vaccine. When the calf lymph is inoculated direct, taken from good pustules of the proper age, no other failures are known but those resulting from the manipulation of the operator. Out of three hundred children thus vaccinated by myself since May 1, of this year (1881), not one puncture—and I say, advisedly, puncture, because with living vaccine I consider it unnecessary to use scarification—has failed to produce good pustules.

"With regard to preserved vaccine, I shall content myself with reproducing the following statistics: In 1870 and 1871, thirty-three of the most reliable physicians in Belgium have reported to me the results obtained by them in vaccinations and revaccinations, by means of calf lymph on points sent out by the State Vaccine Institute of Brussels. The results are: 1. In vaccinations, out of a total of 500 cases there were 479 successful, being at the rate of 96 per cent. 2. In revaccinations, out of a total of 5,448 cases there were 3,419 successes, being at the rate of 62 per cent."

A prominent authority in America on animal vaccination says that, since he has made himself thoroughly acquainted with the peculiarities of animal lymph, "a failure in primary vaccination of infants is a very uncommon event." And in revaccination his results are "very exactly seventy-three per cent. at the first attempt."

The inability of the most skilful vaccinators of Philadelphia, and elsewhere, also, it is believed, to obtain such favorable results, or any very near approach to them, by the use of virus procured from apothecaries, points conclusively to the virus as being in some way faulty. With the view to ascertain, if possible, the reasons for the unreliableness of such a large proportion of the animal virus now being propagated and sold, it seemed desirable that an investigation should be made, into the management of the various vaccine farms, and for that purpose THE MEDICAL NEWS organized a COMMISSION, whose report is herewith given:

THE VACCINE FARMS ABOUT BOSTON.

The first establishment which we visited was that of Dr. Henry A. Martin & Son. The members of this firm reside in Boston, but their stables and operating-room are located in Brookline, a beautiful village adjacent to, and almost surrounded by, Boston. The stables are well built, well ventilated, and in excellent sanitary condition. The operating-room was also neat and tidy, and well adapted to the purpose. The entire management of the business, from the selection of the animals to the collection and packing of the lymph, is under the immediate supervision of the members of the firm, the junior member, Dr. Stephen C. Martin, giving his undivided attention to the business.

It is well known to the profession that to Dr. Henry A. Martin belongs the credit of introducing into this country the vaccination of animals as the means of supplying bovine virus for general use. In 1870 he sent a special agent to France for the purpose of procuring some of the Beaugency "stock" of virus then being propagated by Prof. Depaul. His agent returned home in September of that year, bringing with him an abundant supply of animal virus, and also several pamphlets and publications by Depaul, replete with instructions on the subject of animal vaccination. Having secured a herd of young healthy animals, Dr. Martin at once began the propagation of animal lymph, and, with considerable care and skill, he has been able to maintain the same "stock" of virus by transmitting it from one heifer to another, through an unbroken series to the present time.

The history of the Beaugency virus dates back to March 28, 1866. On April 26, it was reported to the Academy of Medicine of France that a case of casual or spontaneous cow-pox had been observed at Beaugency, a town in France. Prof. Depaul, "Directeur de la Vaccine," promptly repaired to that town, and saw, as reported, a young milch cow, thirty months old, in which the disease had appeared. The milker of this cow had noticed (March 28) that the animal was less gentle than usual, and presently a French midwife observed vesicles on the udder which bore a striking resemblance to vaccine vesicles, with which she was very familiar. This midwife, a veterinary surgeon, and four physicians of the town closely inspected the animal, and found seven or eight vesicles on the udder at the base of the teats. In the same stable was another cow, but she bore no evidence of the disease. A horse in an adjoining stable, separated only by a very thin partition, was carefully examined by the veterinary surgeon, but failed to present any symptoms of grease, or any other disease. With the view of testing the genuineness of the cow-pox in this case, these four physicians, the veterinary surgeon, and the midwife, decided to inoculate another cow and two children with some of the fluid virus taken from the vesicles. Accordingly, a cow aged three years, and two infants only a few months old, were vaccinated. The operation was successful in all three, being followed by perfectly typical vesicles at every point of insertion.

Subsequently, M. Brechemeier, in company with several other physicians, visited Beaugency, and saw only cicatrices on the original heifer, but on the second, six crusts, a number equal to that of the insertions of virus, were found. Two of these were

[1] British Medical Journal, Nov. 12, 1881.

removed, and on his return home to Orleans, Brechemeier vaccinated a calf with them, obtaining out of six insertions only one vesicle, but that one was perfect and characteristic. From this single vesicle, a third calf, aged five months, and several children were successfully vaccinated. This calf was seen by Depaul, and he was satisfied that the vesicles were perfectly characteristic. From these vesicles Professor Depaul vaccinated a calf, and on the next day (April 31st) departed with his heifer for Paris. With the lymph obtained from this calf, Depaul began the systematic propagation of bovine virus.[1]

Dr. Martin says, "The virus brought to America was from the 258th, 259th, and 260th animal of Dr. Depaul's series, beginning with the heifer of Beaugency. It may be worth while to state the great probability that in America only has the 'stock' of Beaugency virus been perpetuated.

"During the Franco-Prussian war and the siege of Paris, vaccination of animals ceased in that devoted city for most evident reasons. In November, 1873, Prof. Depaul assured me that the virus carried from Paris by my agent, in 1870, was the last that left the city, and that, during the siege, the 'stock' was lost. The animal virus employed since the war is from other stocks discovered since that of Beaugency, and substituted for it for no good reason, as will be shown in another part of this report. No comments need be made on pretended 'importations' of Beaugency virus since the Franco-Prussian war."

It will be seen further on that two or three of the producers claim to have imported some of this "stock" of virus since the Franco-Prussian war. We think it quite probable that all the true animal virus now being propagated in this country has descended from that originally introduced by Dr. Martin. Of course we should except a recently-discovered "stock" known as the Cohasset.

In February, 1881, a case of casual or so-called spontaneous cow-pox was observed at Cohasset, a small town in Massachusetts. This came to the knowledge of Dr. Martin, but he was at first somewhat incredulous concerning the true nature of the disease, having been so often disappointed in similar reports. At last, however, he concluded to visit the locality and inspect the animal. To his surprise, he found that the disease in the cow bore a very striking resemblance to true cow-pox. He procured some of the virus from the vesicles, returned home, and with it inoculated a heifer. The result proved successful, as the vesicles which developed were perfectly characteristic. With virus taken from this heifer he vaccinated an infant, and vaccinia developed and pursued so regular and typical a course that the genuineness of the virus was considered proved beyond all question. Since then Dr. Henry A. Martin & Son have continued to propagate the Cohasset stock of virus, as well as the Beaugency, keeping the two "stocks," however, entirely separate.

For the production of the very best lymph, Dr. Martin prefers calves ranging from six to eighteen months old. The calves should be healthy and entirely free from any skin disease. Heifers somewhat older are sometimes used, but never after they have borne a calf. Dr. Martin objects to using old cows, because, he says, the virus taken from them is liable to make very sore arms.

The inoculations are usually made on the hinder part of the heifer, on and underneath the labia, extending downwards toward the udder. A space on one side of the animal, near the flank, is also used. Of course, before the inoculations are made, the hair is thoroughly shaved from the localities to be inoculated.

From fifty to eighty inoculations are made on one heifer, and with a good yield of lymph, from 3000 to 4000 ivory points may be charged. The period for the collecting of lymph is commonly from the seventh to the ninth day of the vesicle, though experience alone must determine this point, for the vesicles do not always run the same course in all animals. Experience, knowledge, and, we may add, *honesty*, also, are needed to determine a propagator when to cease collecting; for virus taken after a certain time, and after a certain amount has been secured, is quite certain to prove inert. Unscrupulous producers have been known to collect serum, not virus, from an animal long after the pure lymph of the vesicles had been exhausted. This, doubtless, is one very common cause of the frequent failures in vaccination by what is supposed to be animal lymph.

Dr. Martin & Son rarely collect lymph in any other way than on ivory points. They do not recommend capillary tubes as a means of collecting and preserving lymph, and strongly advise against the use of crusts. When the ivory points have been well charged—dipping them once in pure and active lymph is always sufficient—and when the lymph has thoroughly dried, they are put up in small packages, and carefully guarded against the moisture in the atmosphere by being first wrapped in cotton, then in tissue-paper, and then, to make them perfectly air-tight, in a covering of thin, tissue-like gutta-percha. The packages are then placed in a refrigerator until they are required for use. Concerning the preservation of virus, this firm says, "Keep it dark, dry, and cool, no matter how cold, or indeed how many degrees below zero, but avoid great heat, even when dry, or any degree of heat and moisture."

The "lancet-shaped ivory vaccine points" are the result of the inventive genius of Dr. Martin. They are now very generally used in this country, and to a considerable extent in Europe. Dr. Warlomont says of them, "Much is said, and justly, at the present, of American points, with ends sufficiently sharp to effect the direct introduction of the vaccine without the aid of the lancet. These points display the perfection of workmanship, and I prefer them, on that account, to all others—notwithstanding that, for the preliminary abrading of the skin, I should always give the preference to instruments made of metal."

Dr. Martin's operating table seems admirably adapted to the purpose for which it is intended. The

[1] These facts are gleaned from Dr. Martin's Report on Animal Vaccination to the American Medical Association in 1877.

top of the table is fastened to the framework in such a way that it may be made to assume either the perpendicular or the horizontal position. When an animal is to be operated on, the top of the table is brought to the perpendicular, the heifer is led alongside of it, securely fastened, and then the top of the table is tilted back to the horizontal position, carrying with it the heifer, which now lies quietly and comfortably upon its side, ready for inoculation, or collection of lymph, as the case may be.

During the period of cow-pox in the animals, they are stabled and well fed. Their value is not affected by having undergone the disease. On the contrary, some stock-farmers are of the opinion that the inoculation renders them less liable to some of the diseases which occasionally prevail among cattle.

Concerning the proper method of using dried animal lymph, Dr. Martin & Son, in their circular to the profession, give directions that are of the utmost importance. They particularly emphasize the necessity of securing a thorough solution of the lymph. They say, "The animal vaccine virus, or, rather, the animal albumen in which it is contained, is not nearly so soluble, either in water, or blood, or serum, as the humanized, and *much greater* care is necessary to ensure its perfect solution than is at all necessary with the old (humanized) lymph." And again, "If the albumen on the points is not dissolved and fully applied to the incised surfaces, vaccination will be often futile, however fresh and vigorous the virus." With such and other necessary precautions, "Dr. Martin does not remember a case of failure in many hundreds of primary vaccinations of adults which he has made; nor, now that he *insists* on thorough work, notwithstanding the shrinking of babies and sympathetic mothers, does he have any failures with infants; nor does he *hear* of any such when sufficient care and a little time are taken."

Statistics showing the efficacy of the virus produced by this firm have been published by a committee appointed to superintend the public vaccination of the citizens of New Haven, Conn. According to the report of this committee, 2381 primary vaccinations were performed, of the number in which the result was ascertained, 88.5 per cent. were known to be successful. 678 of the number did not return for inspection, presumably because they had been successfully vaccinated. If an inspection of the entire number could have been made, the percentage of successes would no doubt have been found to be still greater. 2362 revaccinations were performed (no child under twelve years of age having a good cicatrix was revaccinated), with the result of 77.1 per cent. of successes.

Very frequently complaints are made of the tinge of blood on the points issued by Dr. Martin & Son. When in their operating-room and witnessing the vaccination of a heifer, we noticed that they used in preference the points that were most bloody—probably because they were less salable, but they were evidently not less efficacious. In order to correct the erroneous impressions entertained by physicians on this point, the firm has issued a circular in which it is claimed that it is utterly impossible to charge a single *ivory* point with virus *direct* from the heifer without its having a yellowish or reddish tinge, due to more or less admixture with blood, and that, if there is any choice, the reddish points are the best.

(*To be continued.*)

REVIEWS.

A Manual of Ophthalmic Practice. By Henry S. Schell, M.D., Surgeon to Wills' Eye Hospital, etc. 12mo. pp. 263. Philadelphia: D. G. Brinton, 1881.

The year 1881 has been fruitful in the production of books upon ophthalmic medicine and surgery, three having appeared almost simultaneously at the close of the year. Of these the manual of Schell is the smallest, being intended probably for students and general practitioners. It consists of two hundred and sixty pages, clearly printed on slightly tinted paper, and contains fifty-three illustrations on wood. It is divided into fourteen chapters, the first of which treats of the anatomy and physiology of the eye. In this chapter are to be noted several inaccuracies and insufficient definitions, which mar its appearance. It is not strictly accurate to say that the retina "encloses the vitreous humor," or that the "ciliary ligament is the ring of fibres which joins the iris, cornea, and sclerotic, in which is the minute sinus known as Schlemm's canal." The illustrations are in the main fairly good, but on page 70 is a very bad representation of a symblepharon, which is a great blemish.

In the chapter upon the ophthalmoscope, the author fails to recognize Loring's priority in devising the very convenient, modern instrument, now used so extensively in this country, as well as the general superiority of his instrument over others. The chapter on "Refraction and Accommodation" is sufficiently explicit, but the definition of the visual angle is incorrect. We are glad to see that the author emphasizes the importance of the use of atropia in testing satisfactorily the actual refractive condition of an eye, and also that he recognizes the part played by the condition of the nervous system in so frequently exaggerating asthenopic symptoms. In the treatment of paralysis of the ocular muscles, we question the value attributed to the internal administration of iodoform. The remarks on what Schell calls "reflex asthenopia" are briefly, but clearly, expressed; and this is a subject of some importance. In speaking of the operation of tattooing the cornea in opacities of this membrane, for its cosmetic effect, the author makes no reference to the fact that these artificial stainings wear away in process of time, are not of long duration, and the operation must be repeated. The description of the operation of abscission of the cornea for total staphyloma is incorrect in terms, and needs modification. We are glad to see that the author opposes the use of chloroform in ophthalmic practice, on account of its danger to life, as we consider this most sound advice.

In the therapeutics of optic neuritis the author is not sufficiently cautious in his administration of mercury. We also dissent from his definitions of the terms amblyopia and amaurosis.

The aim of the author has evidently been to make a concise, practical manual, and in this he has probably succeeded, but we question the real value of all manuals in medicine as aids to knowledge, for the information thus gained is apt to be faulty, and is always insufficient. That, however, there is a place for such manuals in our literature is demonstrated by the frequency with which they appear, and it is, perhaps, too much to expect the average, busy practitioner to possess more than a very superficial knowledge, in these times, of the many subdivisions of our science.

SOCIETY PROCEEDINGS.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Stated Meeting, April 5, 1882.

W. S. W. Ruschenberger, M.D., President, in the Chair.

Dr. Geo. C. Harlan reported *Two Cases of Congenital Irideremia, with Lamellar Cataract in one and Dislocated Cataractous Lenses in the other.*

Case I.—N. J. M., aged 12, says that he knows of no defect in the eyes of any other member of his family in this or preceding generations, except that his mother is "short-sighted." He is of medium size, and, except his eyes, well developed.

His vision is $\frac{9}{cc}$ and is not improved by glasses or the stenopaic hole. There is no photophobia, and he sees better in a bright light than in a subdued one. The corneæ are clear, but perhaps very slightly below the normal size, though a constant and decided nystagmus makes it impossible to measure them accurately. The eyes are free from irritation, and their tension is normal. There is not a vestige of iris in either eye. There is well-marked lamellar cataract in both eyes. In each lens there are two opaque layers with clear lens matter intervening between them, beautifully seen by oblique illumination. Only occasional and partial glimpses of the fundus can be obtained, but the choroid seems normal. There is not sufficient vision for any satisfactory test of the accommodation.

Case II.—I. B., a well-grown boy of thirteen years, has rather prominent eyes, with full-sized corneæ, and normal tension, but the iris is entirely absent in both. In the right eye the cornea is quite clear, and, though there are floating opacities in the vitreous, the details of the fundus can be seen fairly well. The lens, which is of normal size, is opaque and white, and is dislocated upwards, so that only about its lower half is seen beneath the corneo-sclerotic junction. The ophthalmoscope shows a hypermetropia of $\frac{1}{6}$, which, assuming $+\frac{1}{4}$ to represent the loss of refractive power induced by aphakia in the emmetropic eye, indicates a structure of the ball corresponding to a myopia of $\frac{1}{12}$. The choroid and retina appear normal in structure, but the optic disk is atrophied and greatly distorted, the vertical diameter being twice that of the horizontal, and the retinal vessels crowded to its inner edge; vision is only quantitative. There is no nystagmus.

In the left eye there is a diffused haziness of the cornea, which, together with a greater opacity of the vitreous than in the other eye, makes the details of the fundus invisible. The lens, which presents the same form of cataract as that in the right eye, is still further out of position, and only a narrow edge of its periphery extends below the margin of the sclerotic. The lenses seem to be held in their unnatural position by some attachment of their upper margins, while the lower are free, and they swing backwards and forwards, as if on hinges, with the movements of the balls. In the left eye the lens has caused an absorption of the tissues, against which it rests until the choroid has disappeared from above it and the sclerotic is very much thinned and slightly staphylomatous. When the cone of light concentrated by a convex glass is thrown upon it from below, the outlines of the lens become distinctly visible through the sclerotic.

In commenting on these cases, Dr. Harlan said that though irideremia (iris and eremia, absence), or aniridis, is an extremely interesting anatomical curiosity, it can scarcely be said, in the present state of our knowledge, to teach any useful lesson in embryology or pathology. Numerous hypotheses have been suggested to account for its occurrence, but most of them are more fanciful than philosophical, and perhaps none of them are more rational than that maintained long ago by Von Ammon, who, in view of the late appearance of the iris, after the choroid is fully formed, considered its absence as simply the result of an arrest of development of the uveal tract. It is a curious fact that this anomaly is almost invariably symmetrical. According to Manz (*Handbuch, Augenheilkunde*, II., p. 90), but one case has been reported in which it occurred in one eye only. Another point of interest in the history of this defect is its decided tendency to hereditary transmission. A number of cases of inheritance have been reported; one (quoted from Von Ammon by Lawrence) in which one member of the first generation was affected, three of the second, and five of the third.

The fact that cataract is very generally associated with irideremia, has given some support to a suggestion that the iris is concerned in the nourishment of the lens: and to an ingenious theory of the causation of irideremia which supposes that the iris has been crowded out, as it were, by the lens remaining too long and too closely in contact with the cornea during embryonic life. This coincidence of cataract with irideremia is, however, not constant, as cases are recorded in which the lens was transparent. One is reported by Dr. Reuling (*Am. Journ. Med. Sci.*, January, 1875), in which vision was sufficiently acute to enable the observer to determine that the power of accommodation was unimpaired.

The normal intraocular tension found in cases of irideremia has been adduced to prove that the aqueous humor is not secreted by the iris, but chiefly, if not entirely, by the ciliary processes. In the rabbit the ciliary processes are connected with the iris, and when both are removed, the eye becomes very soft and the aqueous humor is never regenerated (Deutschman, *Gräfe Arch.*, v. 26, No. 3). This, so far as it goes, gives support to the advocates of sclerotomy, instead of iridectomy, in glaucoma.

Partial congenital luxations of the lens are usually upwards, as in Case II., and frequently occur without defect of the iris. In the left eye of this patient, the lens is so far out of place that it would be entirely concealed if the iris were present, and this case might then be readily mistaken for one of the very rare anomalies of congenital aphakia.

Dr. W. F. Norris said that, through the kindness of Dr. Harlan, he had had an opportunity of making an examination of the eyes of the patients whose cases have been described. On first inspection of one of the cases, he thought he could detect a slight peripheral remnant of the iris, but more careful examination, aided by the ophthalmoscope and oblique light, showed that every vestige of iris was wanting, and that this appearance was due to the shadow cast by the limbus and conjunctivæ corneæ on the periphery of the anterior chamber. It has occurred to him that at least some of the cases which have been reported in the older books as partial irideremia, might possibly be due to this similar appearance in the days when the above-mentioned methods of examination were unknown.

Dr. John M. Keating read *A Report of a Case of Malaria, in a Child aged Twenty Months, in which Morbid Enlargement of Liver and Spleen occurred; and also of a Case of Aortic Stenosis and Regurgitation with Atheromatous Aorta in a Woman aged One Hundred and Three, and exhibited the Specimens.*—He gave the statement of the mother, as throwing some light on the antecedent history of the child from whom the interesting pathological specimens were taken.

Case I.—M. N., aged twenty-six, married, entered the obstetrical wards of the almshouse two years ago, shortly after her arrival from Ireland. Little more than

a month after, July 24th, the child was born. She remained in the house one year, and went to Wilmington, Del., to live. Shortly after her arrival there, in July of last year, she was seized with chills; she states that she lived in a swampy locality, and that everybody living in the neighborhood suffered severely from intermittent fever. She states that the malarial paroxysms were not of the usual type, the disease being often of a cerebral form, accompanied by violent headaches, which compelled her to place ice to the head, and that she was at times delirious. The attacks came on daily for several days at a time, commencing at four o'clock in the afternoon. She nursed the child until its death. About two weeks after the mother was first affected, the child began to fail—it exhibited the same symptoms as the mother. Its attacks would come on about four in the afternoon. The ears became cold, finger-nails blue, there would be vomiting, followed by frequently loose stools of a green color, and containing a great deal of mucus; at times constipation would exist for days, to be followed by stools of a chalky color. There were no convulsions; no strabismus. Child always nursed well, and the mother always had plenty of milk. On the 15th of October following, the child being fifteen months old, she again sought admission to the hospital. Upon admission the mother showed a marked malarial cachexia, which was equally noticeable in her infant. The mother was placed upon iron and quinia in large doses, followed by cod-liver oil, upon which she rapidly improved. Her milk was examined microscopically, and found to be normal. On examination of the child, attention was immediately attracted to the abdomen, which seemd to be unusually enlarged, especially upon the left side; this was found to be due to an enlarged spleen, which extended from the normal area of splenic dulness down to the crest of the ilium, its anterior edge terminating in a ridge, about an inch to the left of the umbilicus. The mother had not noticed this ridge until her admittance to the house. The liver was also found to be enlarged, and the intestines were unduly distended with gas. Every effort was made by treatment, both constitutional and local, to reduce the liver and spleen to their normal size, and for a time we thought our efforts would be successful, as the lower border of the spleen became separated from the ilium by a line of tympanitic resonance. The malarial attacks were checked by suppositories of quinia, but the use of tonics and judicious diet had little effect upon its nutrition. The child died March 5, 1882, aged twenty months. Post-mortem examination gave the specimens, which were exhibited. The liver weighed nineteen ounces, and the spleen fourteen ounces.

There was no history of syphilis in this case. Dr. Formad expressed the opinion that the enlargement of the spleen was that of simple hypertrophy of the congested organ, due to malaria, the enlargement of the liver being due to fatty change; the specimens, on this account, are of great interest.

CASE II.—Mary Anderson, aged 103, was admitted to the old colored woman's ward January, 1882. About three weeks after admission she suffered from an attack of bronchitis, which persisted more or less until her death; while treating her for this affection, attention was called to her heart, which was found to present a well-marked, double aortic murmur, *i. e.*, regurgitant and obstructive, also a slight mitral whiff, probably regurgitant. She presented no lesion of any other organ, complaining only of slight rheumatic muscular pains.

The patient was well nourished, appetite good, cerebral condition fair. She continued in the above condition, gradually failing, until death, which occurred March 22, 1882.

Post-Mortem.—Lungs: Bronchitis well marked over both lungs; the bronchial tubes and bronchioles exuding pus, upon pressure, in noticeable amount. At the right apex were a few masses, which had undergone calcareous degeneration, cicatrization, and puckering. The point at which they were deposited was drawn into a stellate mass attached to the pleura. *Heart* and *Aorta:* Upon removing these organs they were found to present a very interesting condition of atheroma, due to the age of the patient and the unusual duration of the disease, which enables us to study it in what may be termed its last stages. The aortic valves showed atheromatous changes, the middle leaflet being almost solid at its base; the aorta was dilated and thickened, with atheromatous deposit almost concentrically surrounding the vessel; portions of this, when detached, were like thin sections of solid slate. Along its course, six inches from the aortic valve, there was a large patch of ulceration, on which blood had collected into a firm, organized clot, thus preventing rupture. The coronary arteries could be felt like twigs of wood in the heart muscle.

The interest of this case lies in the fact that the supposed great age of this patient was arrived at by the absence of laborious occupation, and the fact that, with the nature of her heart lesion, sufficient compensation had been established to carry on life, no extra strain having been placed upon the heart's power. This case is an interesting study in prognosis.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, April 6, 1882.

THE PRESIDENT, EDWARD L. DUER, M.D., IN THE CHAIR.

Removal of the Uterus for Fibroid Tumor; Death; Autopsy.—DR. E. E. MONTGOMERY reported the following case which had been under his care at the Philadelphia Hospital.

Sarah B. (colored), æt. 46, widow, native of New Jersey, of temperate habits, has been an inmate of the Philadelphia Hospital for nearly three years. She entered the gynecological ward about the last of February, soliciting the removal of a large abdominal tumor.

The establishment of her menstrual function was attended by severe hæmorrhage, but soon became regular. The menses ceased at one time for five years. She has not menstruated for two years. She was never pregnant.

The growth of the tumor, which began eighteen years ago, she attributed to a kick in the abdomen from her husband. The tumor soon acquired great size, filling up the abdomen and pressing against the diaphragm, causing great distress.

She has been treated by means of hypodermic injections of ergotine, and later by the earth treatment. The latter was followed by a slight reduction, possibly due to the rest in bed. When she came under my care, the abdomen was more prominent than if at full term of pregnancy. Owing to the woman's emaciation and the loss of muscular power in the walls of the abdomen, the mass had settled down into the lower part of the cavity, encroaching but little upon the portion above the umbilicus. A fluctuating surface, evidently the bladder, covers the whole of the lower face of the mass. The tumor was regular in outline and about equal in size on either side of the median line. At the upper part of the right side could be felt a smaller, loosely connected mass, between which and the tumor the percussion was resonant.

The abdominal walls were freely movable over the tumor, but the latter could be raised or moved from side to side only to a limited extent. Examination per vaginam disclosed the whole uterus involved in the

mass which rested upon the pelvis. The sound could be passed five inches into the uterine canal along the posterior border of the tumor. The posterior lip was thin.

We evidently had a fibriod tumor which had originated in the anterior wall of the uterus, and had drawn the bladder up with it as it grew.

In view of the large size of the mass, the anxiety of the patient for its removal, and her general condition, it was decided after a staff consultation to make an exploratory incision, and, if the adhesions were not extensive above and posteriorly, proceed to the complete removal of the tumor and uterus.

The patient was kept quiet in bed one week and sulphate of quinia three grains, tincture of the chloride of iron thirty drops, were given three times a day. The bowels were regulated by the use of compound liquorice powder. The urine, examined by one of the resident physicians was found alkaline, and contained no albumen.

Operation: March 17, assisted by my colleagues, Drs. Duer, Warder, Parish, Musser, and Hatfield, I proceeded to perform the operation under antiseptic precautions, using thymol spray. An incision three inches long was first made down to the tumor and the hand introduced; no adhesions were found above and but one band posteriorly. The bladder was spread out over and closely adherent to the tumor anteriorly. The opening was now extended to the symphysis below and the umbilicus above, and the tumor with some difficulty lifted through. The peritoneal covering of the tumor was burned through with Paquelin's thermo-cautery, and the bladder dissected off. The capsule was then raised on either side, permitting ligatures to be passed beneath the broad ligaments. The lower portion of the cervix was then tied in two sections, both surrounded by ligatures, and the mass removed. Although the hæmorrhage had not been excessive, the condition of our patient now became critical. The pulse was very feeble, indeed scarcely preceptible; respiration infrequent and sighing. It was only through the persistent care of Dr. Parish in the use of hypodermics of whiskey and ammonia, and hot water applications over the chest, that she survived until the wound could be closed. She was placed in bed and surrounded by hot bottles, ergot and digitalis were given hypodermically, and whiskey by the mouth and rectum; but without counteracting the effects of the shock. She died two and a half hours after the operation.

At the *autopsy* a couple of ounces of bloody serum were found in Douglas's cul-de-sac. The kidneys were small, soft, flabby, and upon being opened were found dilated into sacs, their structure being largely destroyed. One was full of pus. The ureters were greatly dilated. They were not injured in the dissection for the removal of the mass. The heart was contracted, pale, and empty of blood. The ligatures had been applied around the cervix one and a half inches above the os.

The tumor was a solid mass weighing sixteen pounds, its longest diameter laterally, quite regular in outline, presenting from the right upper surface a smaller mass with an elongated pedicle.

Aside from the necessity of placing such cases upon record to obtain correct statistics, it is of special importance as an illustration of the advantage to be derived from a careful study of the condition of the renal organs previous to the operation, and the increased gravity given by any symptoms that would cause us to suspect a renal lesion. We made no microscopical examination of the urine, so the presence of pus escaped notice, though its presence should have been suspected from the alkalinity of the urine.

Dr. B. F. Baer considered the examination of the urine a very important point, as albuminous or purulent urine is always a sign of danger.

Dr. H. Beates remarked that, in testing for albumen in urine by means of Heller's test, he had noticed a singular fact in some instances where the urine was alkaline or but very faintly acid. If the acid was added to the urine before boiling, no precipitation occurred, but by reversing the test, boiling first and adding the acid afterward, the presence of albumen was shown.

Dr. Montgomery, in closing the discussion, remarked that, although at the autopsy one kidney was found full of pus, none had ever been observed in the urine. This was perhaps due to occlusion of the ureter from pressure by the tumor. If pus were present in small quantity it might be considered to arise from cystitis from pressure on the bladder. But if urine is repeatedly found to be alkaline when no alkalies have been administered, it would indicate the presence of pus, although none were found.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, April 6, 1882.

Fordyce Barker, M.D., LL.D., President, in the Chair.

After the reading and approval of the minutes of the last meeting, the President announced the presence of Dr. J. W. Thompson, of Kentucky, and Dr. Stanton, of North Carolina, as guests of the Academy, and invited these gentlemen to take seats upon the rostrum.

Dr. John G. Adams, Corresponding Secretary, reported the receipt of an invitation from the Secretary of the Fourth International Congress of Hygiene, to the Academy, to send delegates to the Congress, which is to be in session from the 4th to the 9th of September, and he then moved that the Council of the Academy be empowered to appoint delegates. Carried.

In the absence of the Statistical Secretary, Dr. Adams further reported the death of a Fellow of the Academy, Dr. Ed. L. Beadle, in the seventy-fourth year of his age. Appropriate resolutions were offered and adopted, and Dr. Adams was appointed by the Chair to prepare a memoir of Dr. Beadle, to be read at the next meeting.

In accordance with a motion carried at the last meeting, the report, which was then read, of the delegates from the Academy to the Medical Society of the State of New York came up for consideration and action. The part of this report which is of general interest to the profession, is principally concerned with the new Code adopted by the State Society. When the report was read at the preceding meeting, there was no time for its discussion, as it was then past the hour for adjournment.

Upon its being again brought before the Academy, Dr. Austin Flint said that he thought all would be agreed that the most important element of success and usefulness of the Academy is the fact that it has confined its attention exclusively to the advancement of medical science, and kept aloof from those subjects that may be distinguished as medical politics. He would not undervalue the wisdom of the topics referred to in the report. He had his convictions concerning them, others had theirs. There was no reason why the Academy should discuss any of these topics; they belonged to subordinate or co-ordinate sister societies, such as the County Medical Society, and, holding these views, he moved that the report of the delegates from the Academy to the Medical Society of the State of New York be accepted, and that the consideration of the topics involved therein be indefinitely postponed. Carried unanimously.

The next business was the reading of the scientific paper of the evening, by FESSENDEN V. OTIS, M.D., entitled:

Case of Persistently Recurring Spasm of the Bladder, Resulting in Thickening of its Walls, Dilatation of the Ureters, and Hydronephrosis. Death from Uræmia. Pathological Specimen.—As introductory to the subject of persistently recurring spasm of the bladder, Dr. Otis cited a few instances of certain leading features similar to it, and illustrative of some of the possible sources of error in the diagnosis and treatment of urinary difficulties.

A summarized history of the case which formed the subject of the paper is as follows:

Mr. Z., æt. fifty-seven, had suffered from frequent difficulty and more or less painful urination for over twenty years. His trouble began with an acute urethritis, which soon merged into a chronic form lasting some years. During this time, he passed through the hands of many distinguished physicians, who, from the symptoms, were led to make repeated examinations for stone. Painful urination continued, however, and he consulted both regular and irregular physicians and surgeons. Sir Henry Thomson, of London, and M. Civiale, of Paris, both examined the patient for stone, but with negative results. His frequent and painful urination continued, and his urine, at times, was bloody and always contained more or less pus. Patent medicines, medicinal waters, and spiritualistic agencies had all been tried without avail. For a few years past he had been under the general care of Dr. M. His sufferings increased to such an extent that surgical aid seemed imperatively called for. He was referred to a surgeon eminent in genito-urinary matters, who, also failing to find any stone to account for the cystitis, treated it by repeated washings, and the occasional passage of a number twenty-six sound into the bladder, which latter procedure, the patient stated, was the only thing that had ever been done for him that appeared to do him any good. After a time his sufferings increased and became complicated with malarial symptoms. It was now that Dr. Otis first called to see the patient. His general appearance was that of a man suffering from malignant disease. His urination, which occurred at intervals of fifteen minutes, was each time accompanied by an agonizing spasm lasting about two minutes. Spasm less frequent and severe at night. Complained of severe pain in region of left kidney. This had been of long duration, and surgeons had very generally attributed it to stone in the kidney. Pain during micturation always referred to neck of bladder. Urine showed no evidences of organic disease of the kidneys. Had never had pain in glans penis and only suffered during urination. Had long worn a urinal. Diet, chiefly milk. A careful general examination failed to discover any evidences of organic disease in the thoracic or abdominal regions. The urethrometer showed a normal calibre from the bulbo-membranous junction to within three-fourths of an inch of the urethral orifice, where the canal suddenly narrowed.

The repeated examinations of the bladder by distinguished surgeons, together with entire absence of pain in the glans penis, or any sudden stoppage of urine during the act of urination, satisfied Dr. Otis that, if there was any stone in the bladder, it was encysted, or probably would not be discovered by the use of the sound. It was also thought that the patient could not have lived so long had his trouble been due to organic disease of the spine or kidneys. Dr. Otis suggested the possibility of the difficulty being in a measure if not wholly of reflex origin, and due to the irritation of the contracted and thickened urethral orifice and proposed to test the truth of it by dividing the meatus so as to make it correspond with the remaining portion of the canal. To this the patient finally consented, and the meatus and tissues extending back three-fourths of an inch were divided, and a thirty-seven solid sound passed well into the bladder. The operation was followed by incontinence of urine for three days, unaccompanied with pain. The patient was then seized with a severe attack of kidney colic (left side), which was relieved by a hypodermic injection of morphia. Twenty-four hours later he had another attack which was treated in the same way, after which he passed a comfortable night. Pus and mucus, which were present in great quantity at the time of the operation, steadily decreased. Spasm and pain in the bladder occurred more frequently. Patient was kept narcotized with morphia. Finally he refused opiate and declined beef enema, dying uræmic eleven days after the operation.

At the autopsy, which was made by Dr. Welch, both kidneys were found enlarged and with adherent capsules; cortical substance of nearly uniform grayish appearance; pyramids encroached upon by dilated calyces; no abcesses. Ureters dilated to nearly the calibre of the small intestines, and their walls thickened. No obstruction to passage of urine in kidneys or ureters. Wall of bladder thickened to about four times its normal diameter, the muscular coat being most affected. Bladder mucous membrane thickened, and presents slightly elevated, grayish patches such as seen in so-called diphtheritic cystitis. Capacity about normal; contents, ammoniacal purulent urine and a small calculus, about an inch in length and conical in shape, apparently of recent formation. Urethra and prostrate about normal. Microscopical examination of kidneys showed marked new growth of fibrillated connective tissue, which is infiltrated with lymphoid cells. Uriniferous tubes are in places compressed and atrophied, in other places dilated, and in still other situations filled with fatty epithelium. Cause of cystitis not apparent.

It will be seen from the above that there was no apparent mechanical obstruction to the passage of urine in the kidneys, ureters, bladder, or urethra, and yet the conditions found after death were such as to demand a mechanical obstruction to the exit of urine from the bladder to account for their existence. Hence, Dr. Otis was of the opinion, that the only possible solution of the difficulty is through the claim of a persistently recurring spasmodic closure of the orifice of the bladder, as a result of irritation reflected from some point in the urethra. The urethrometer, as previously stated, showed a narrowing of the urethra for three-fourths of an inch back from the meatus; this amounted to thirteen millimetres. The possible influence of a contracted meatus in producing more or less grave disturbances throughout the urinary tract has long been known, though not generally appreciated. It was mentioned by M. Civiale in 1850, and Sir Henry Thompson in 1858. In 1874 Dr. Otis first read a paper upon this subject.

In the case reported to-night, complete division of the contracted anterior urethral tissues, followed by introduction of the sound, unquestionably lead to relief from spasm of the bladder. Dr. Otis thinks we are warranted in believing that, if this condition and its possible effects had been appreciated at an earlier period in the life of the patient, and had been relieved, years of agonizing suffering would have been avoided, and his life might have been saved through an operation, in a surgical point of view, of the most insignificant character.

In conclusion, Dr. Otis thinks it must be admitted that symptomatic evidences of organic or idiopathic disease of the bladder and prostate, as well as of stone or other adventitious material in the bladder, should be

received with the distinct understanding that such evidences are possibly due entirely, or in part, to sources of irritation quite outside of the organs apparently the subject of disease.

Dr. Alfred C. Post said he had been long satisfied that in many cases a contracted urethra, if not the cause of irritations, was a very important element in maintaining the same. This, he thought, was often the case in senile enlargement of the prostate. He had known cases in which catheterism was no longer necessary after dividing the meatus. A young man was sent to him from Massachusetts, a few weeks ago, with a close stricture of the urethra. Urine was voided in drops, and was accompanied with great distress. It was impossible to introduce a catheter into the bladder; but, by making a slight incision before and behind, a series of sounds, from fifteen millimetres up to thirty, were passed at intervals of two or three days. The patient returned home, entirely relieved from the difficulty from which he had been suffering.

Dr. E. L. Keyes remarked that he must differ with the author of the paper in regard to the etiology of the case reported. He thought, in the first place, that relief from spasm was due more to the introduction of the sound, and the consequent paralyzing of the urethra, than to cutting. Many cases, presenting the symptoms of stricture and stone, turned out to be of reflex origin. A large number of these undoubtedly recovered from the passage of sounds, unless the meatus was extremely small. Many cases undoubtedly recovered after the constricted meatus was incised, not because of the incision, but because of the introduction of the sound following the operation. Again, it was also true, in many cases where the use of a large sound had failed to afford relief, incising the meatus did not effect a recovery. Dr. Keyes cited a case of frequently recurring spasm, in which no pus was found in the urine, and the patient was perfectly healthy otherwise, though the spasm had lasted for years.

In the case presented to-night, he thought a reasonable explanation could be put forward, which would cover the ground as well as spasm, namely, that the patient arriving at a certain period of life acquired an urethritis. This was his first trouble, notwithstanding the long previous existence of a narrow urethra. Many similar histories were contained in his note-book, where the patient's trouble began with a gonorrhœa, followed by spasm of the deep urethra. Calculous spasm occurred, and finally stone passed out, and the patient remained in a condition of chronic cystitis with more or less tenesmus. The subsequent thickening of the bladder walls causes a pressure upon the mouths of the ureters to such an extent as to inflame them. So, with the case reported to-night, it seemed to Dr. Keyes that the above explanation of its cause and development was a possible one, and would bear serious consideration. The case he believed to be one of gonorrhæal cystitis, originating in a gonorrhœa.

Dr. J. W. S. Gouley said: "I think that one of our Corresponding Fellows has, many years ago, very perfectly and completely described the class of cases to which the one so well described by Dr. Otis belongs. I refer to Dr. Mercier; his explanation is very simple. These troubles, he says, come from persistent chronic urethritis, or rather cervical cystitis following it. The cervical cystitis gives rise to an intense congestion of the capillaries and small blood vessels underlying the mucous membrane. This causes what he calls contracture of the urethro-vesical orifice. He speaks of spasmodic contracture and permanent contracture. The spasmodic contracture follows chronic urethritis, and is curable. The permanent contracture, if left to itself, is incurable. The permanent contracture he calls 'muscular valvule.' It is an impediment to urination which causes the bladder to contract spasmodically, and expel the residual urine.

These constant contractions will cause an hypertrophy of its muscular coat. The retained urine gives rise to cystitis, the inflammation extends up the ureters, the kidneys become involved, and the patients die after a number of years with pyonephrosis and acute nephritis, superimposed upon chronic nephritis. A patient may have valvular contraction of the urethro-vesical orifice, for a number of years, without suffering more than is due to stagnant urine. That the bladder may contract spasmodically without urine in it I cannot conceive. Neither can I conceive that spasm of the urethra will cause chronic retentions of urine. In such a case as described by Dr. Otis, the obstacle is at the urethro-vesical orifice, and an interesting fact is that, at the post-mortem examination, it is not easy to discover the urethro-vesical valvule. It should be examined from above, and should not be slit along its anterior border. The urethro-vesical orifice should be examined from within. Mercier says that the diagnosis of muscular valvule may be made by the rectangular sound.

I have now a young man under my care, about thirty years of age, with chronic urethritis of a number of years' standing. That gentleman, for five or six years, has been unable to empty his bladder. A few months before I saw him, he was urinating every few minutes. His urine was purulent. He used no instruments to empty his bladder. I asked him to urinate, and he passed an ounce or two of urine slightly purulent. I introduced a catheter and drew off eleven ounces of urine, the last of which was very purulent. The catheter has since been introduced two or three times a day, but the patient is not well, nor will he be well until the right thing is done. I would refer those interested in the subject to the works of Dr. Mercier. For one, I am thoroughly convinced of the truth of what he states, and I have had a number of cases extending over years which bear out all his statements in connection with this subject.

I have mentioned the last case, reported by Dr. Otis, first, because of its interest. The first case was one of encysted calculus, not very common, but still we find specimens of them in most of our museums. In my first operation for stone I met with an encysted calculus. It was lodged in the anterior portion of the bladder of a child, now a man. Only three weeks ago I operated upon a gentleman who had an encysted calculus in the posterior part of the bladder; perhaps not truly encysted, but incarcerated. I have never seen a specimen of truly encysted calculus, they are imprisoned in diverticuli in the bladder, the mouths of which are more or less large or full, so that perhaps a half or one-third of the face of the stone is presented at the mouth of the cyst. After I had removed four stones from the bladder by breaking, I made a final exploration with the straight forceps, and felt something in the posterior part of the bladder. I had a great deal of difficulty in clearing it, and before so doing lacerated the mouth of the sac, after which I seized the stone, brought it into the cavity of the bladder, broke it, and removed the fragments. The sum total of the detritus weighed six ounces, but I imagine that this gentleman has not long to live. These masses had caused contracture of the urethro-vesical orifice. I believe the ureters and kidneys are already damaged, as those of Dr. Otis' patient were, and as I myself discovered in his case, for he was also under my care at one time. I refused to interfere surgically because I was convinced he was damaged."

Dr. F. H. Hamilton felt that the profession was greatly indebted to Dr. Otis for his original observations, which, from time to time, have been announced, and which have sometimes startled us, but which, by his

great zeal, have at last, in many instances, come to force conviction upon us. In relation to the point up for discussion this evening, Dr. Hamilton said, "I begin to feel that Dr. Otis is more often right than wrong. I may differ with him in regard to this particular case, but I am convinced that he has given us a great deal of light upon malformations and contractions of the urethra. I wish to say, I can not accept the explanation of my friend, Dr. Keyes. While I agree with Dr. Otis in the main, I feel that his conclusions must in many cases be the exception."

DR. OTIS, in closing the discussion, said that some very interesting points had been brought up. As to the influence of incision of a constricted meatus, without the subsequent use of the sound, he would say, he had on several occasions tried that. I have, he said, in mind the case of a gentleman troubled with frequent urination for a considerable length of time. He passed his urine every fifteen or twenty minutes. He had never suffered from any inflammatory trouble. Upon examination, I found a narrow orifice, which was divided, but no sound was introduced for three days. I was obliged to introduce a catheter to draw off his water. He continued well for a considerable length of time, but the orifice recontracted, which was again relieved by a second operation. I am, however, not at all certain but that, in a considerable majority of cases, the relief is from the introduction of the sound into the bladder. I should not be disposed to quarrel or theorize about this matter, but would simply state that, in these grave cases that have gone on so long, it is worth while to try this experiment—empirically, if you will—to enlarge the meatus and pass a large sound into the bladder. I am satisfied from my experience that many patients will thus be cured and lives saved. This being the case, we can wait for an explanation. Of course, there is a certain amount of theoretical matter connected with this subject, but what I would urge, is that such a simple operation be tried. It can not have any deleterious effect upon the patient. Dr. Hamilton has justly said that a very large proportion of cases do not suffer with contracted meatus, but there is a large class that do so suffer. These I have found associated with debility, in some way induced. These patients have given a history of sexual excesses, and their whole sexual apparatus has been in a condition of reflex disturbance. I have, also, noticed particularly that these men have had gonorrhœa, and most of them a cicatricial deposit therefrom. It is not quite improbable that this cicatricial tissue should entangle nerve-filaments and produce a tonic contracture. However explained, as a matter of fact, division of the meatus, in a very large number of cases, relieves irritation, not alone of the genital apparatus, but the irritation which has extended to the spinal cord and brain. Severe cases of melancholia have thus been relieved. The experiment is one which, it seems to me, is well worth trying.

Upon motion, the Academy adjourned.

NEWS ITEMS.

NEW YORK.

(*From our Special Correspondent.*)

NEW YORK NEUROLOGICAL SOCIETY.—The annual election of officers of this Society took place at the stated meeting held on April 4. Before the meeting, there was a rumor that a contest for the presidency was likely to occur, which attracted to the meeting a number of medical gentlemen who were not members of the Society. The nominations for president, made at the preceding meeting, in accordance with the By-Laws of the Society, were, Drs. Wm. J. Morton, of New York, and Landon C. Gray, of Brooklyn. On the evening of the election, a motion was made by Dr. Wm. A. Hammond, and, despite vigorous opposition, was passed, permitting further nominations for officers to be made before proceeding to ballot. Dr. E. C. Spitzka was then nominated for President. Dr. Gray immediately arose and withdrew his name in favor of Dr. Spitzka, stating that he considered the latter gentleman more deserving of the office than himself, on account of the great service he had rendered to neurological science. As soon as Dr. Gray had taken his seat, Dr. Morton arose, and declared that he did not wish to be tardy in recognizing the value of Dr. Spitzka's scientific labors, and, therefore, would also withdraw from the contest in his favor. This left Dr. Spitzka in the field without a competitor.

Dr. Seguin nominated Dr. W. R. Birdsall, and the Society then proceeded to ballot. The first ballot resulted in neither of the candidates receiving a majority of the votes cast. On the second ballot, Dr. Spitzka was elected by a majority of one vote. The interest of the evening centered on the election of the President, and the balloting for the remaining officers passed off quietly, and resulted as follows: First Vice-President, Dr. W. J. Morton; Second Vice-President, Dr. A. D. Rockwell; Recording Secretary, Dr. G. M. Hammond; Corresponding Secretary, Dr. Mary Putnam Jacobi; Treasurer, Dr. E. C. Harwood; Counsellors, Drs. T. A. McBride, E. C. Seguin, L. C. Gray, W. R. Birdsall, and C. L. Dana.

BROOKLYN.

(*From our Special Correspondent.*)

BROOKLYN EYE AND EAR HOSPITAL.—In the MEDICAL NEWS of March 11 reference was made to the proposed new hospital building for the Eye and Ear Hospital. The negotiations for that building have been completed, and a fine and substantial four-story brick structure has been purchased at a cost of $47,500. It was formerly occupied as the Juvenile High School, and has a central and eligible location. It can readily be adopted so as to subserve the purposes of the hospital for several years to come, and if an extension shall at some future day be rendered necessary by the growth of the work of the institution, there is ample room for it on the grounds that form a part of the recent purchase. The fund for this object has just been completed, and reaches the handsome sum of $50,900, headed by a subscription of $25,000 by Mr. George I. Seney, who was among the early donors to the institution when it was organized in 1868. The annual cost of maintenance has at no time exceeded $4,000. Over four thousand patients are treated annually, whose visits average five for each patient, or over two thousand visits a year at the present time.

SMALL-POX IN BROOKLYN.—A brief story concerning the first 100 cases of small-pox that came under the observation of the Health Department in 1882:

From January 1, 1882, to February 26, 1882, there were reported to the Department of Health, as small-pox, 112 cases. Of this number, 98 were found, upon examination, to have that disease, and 14 not to have it; 2 cases reported as chicken-pox proved to be small-pox.

Of the 14 cases that were examined and found not to have small-pox, 1 was scarlet fever, 4 chicken-pox, 3 measles, 1 rotheln or German measles, and 5 were cases of skin disease.

Of the 100 who had small-pox, 45 had never been vaccinated, 27 of them died, and 1 is yet under treatment in the hospital. Eight others had pale, indistinct and imperfect marks of vaccination, and were probably never vaccinated, using that term as it should

properly be used. Of them, 4 died, so that we may say that 53 had never been vaccinated, and that 31, or 58 per cent., died.

Of the 47 who had been successfully vaccinated, 6, or 12 per cent., died. Twenty-four of this number were adults who had not been vaccinated since infancy; 3 of them died. Of the 23 who were supposed to be protected by vaccination, 20 had a mild attack of varioloid; 1, aged 3 years, who had been well vaccinated in infancy and again in 1870, died; 2 children, aged respectively 6 and 8 years, members of the same family and having good marks of vaccination, died. The youngest person attacked was 3 months; the oldest, 60 years.

CANADA.

(From our Special Correspondent.)

BODY-SNATCHING IN THE PROVINCE OF QUEBEC.—Among many old-fashioned customs which prevail in the province of Quebec, body-snatching is one not usually mentioned, though it probably prevails more extensively here than in any civilized country. The demonstrator of anatomy at the school using the largest number of subjects, told us that in the past eight years about seventy-five per cent. of the bodies dissected were "knaved out of their graves." The reason of this state of things is readily explained. Though there is a capital Anatomy Act, even more liberal than the British Act, it is virtually a dead letter. The only large public institution from which any number of unclaimed bodies are sent to the schools is the Montreal General Hospital. The Hotel Dieu sends very few; the other large poor-houses and asylums none at all. Most of these institutions are under the care of religious sisterhoods, and the burial of the dead is among their chief works of mercy. The present inspector of anatomy has other more important duties to attend to, so that the legitimate supply of material is wholly inadequate. The business of supplementing it is chiefly in the hands of the French Canadian students who know the outlying villages and not unfrequently have accomplices. Owing to the frozen state of the ground the bodies during the winter months are placed in vaults, so that the students sometimes get off with four or five at once. At $25 a piece, the temptation is strong to impecunious students, and the risk is very slight. Though there have been many arrests in the past few years, the perpetrators have usually escaped with a small fine. Two notorious cases this winter have aroused public attention to the matter, and a new bill is before the House of Assembly at Quebec, providing that the heads of institutions shall notify the schools on the death of a friendless individual, and shall hand over the body of the same to the first applicant. It is to be hoped that this will help to do away with the present disgraceful condition of affairs.

NUNS AS PHARMACEUTISTS.—The dispensing of the large Roman Catholic institutions in the province of Quebec is exclusively in the hands of the "sisters," and no more beautifully arranged dispensaries are to be seen than those of the Hotel Dieu and the Grey Nunnery in Montreal. In the first-named institution the sisters in charge are skilled pharmacists, and prepare numerous nostrums which are highly esteemed by the "habitants." They have also published an extensive volume on pharmacy and on the properties of drugs. The system has its disadvantages; we have been told by more than one physician at the Hotel Dieu that liberties were taken with prescriptions, and particularly where expensive drugs were ordered, there was sometimes a doubt as to the accuracy of the amount.

EDINBURGH.

(From our Special Correspondent.)

EDINBURGH UNIVERSITY.—After considerable delay, the Queen has appointed Edwin Ray Lankester, M.D., F.R.S., Professor of Anatomy and Comparative Zoölogy in University College, London, to the chair of Natural History in the University of Edinburgh, rendered vacant by the resignation of Sir Wyville Thomson, who has since died. Professor Lankester is the son of the well-known Dr. Edwin Lankester, and although thirty-five years of age, has for some years occupied a distinguished position among our prominent zoölogists. He is the editor of the *Journal of Microscopical Science*, and is himself an active contributor to this and many of our scientific journals and societies. Among his principal works are, "A Monograph of the Fossil Fishes of the Old Red Sandstone," "Comparative Longevity," and "Contributions to the Developmental History of Mollusca." He is also the editor of several works in natural science, amongst others, a translation of Hæckel's "History of the Creation." He is a naturalist, who has also largely cultivated the physiological part of zoölogy as distinguished from the mere morphological. His name was brought prominently before the country in 1876, in having instituted a legal prosecution of the American spiritualist, Slade, one of whose seances he had attended. He proved to the satisfaction of the court that so-called spiritualism, as practised by Slade, was a fraud, and he procured the conviction of the offender.

VIENNA.

(From our Special Correspondent.)

LOCAL THERAPY OF VARIOLA VERA. — Dr. A. Kupferschmied, of Murzzuschlag, in the recent epidemic, in Vienna, employed with gratifying success the following local treatment for the facial exanthem. As soon as the facial eruption had reached the pustular stage, a mask cut out of gutta-percha paper was covered with four or five layers of iodoform gauze, well saturated with glycerine, and applied to the face. The 50 per cent. iodoform gauze is selected, so that the penetrating odor of the drug shall combat that of the disease. Ordinary gauze may be used instead, if iodoform is disagreeable to the patient.

The following advantages are claimed for this method of treatment.

(1.) It surpasses other methods of smearing the face in cleanliness, and therefore in healthfulness.

(2.) It macerates the pustules, exercises a favorable influence upon the collateral œdema, and cuts short the following stage. The stage of suppuration and of crust-formation, which is the most troublesome and digusting to the patient's attendants, is effectively abbreviated by this therapy. "I was often astonished," says the doctor, "to find under the mask no trace of those dirty, brown scabs which usually form under every other method of treatment."

(3.) The loss of skin-substance is minimal.

Dr. Hans Hebra, who has achieved great local celebrity in treatment of variola vera, bases his treatment upon the early removal of the covering of the pustule, causing, by this means, drying of the contents, and preventing resorption of pus. His purpose is carried into execution (1) by the employment of the continued bath from the first day of fever; (2) by more gradual maceration. The latter method is more extensively used in private practice, as there is a prejudice against the continued bath.

In this method, the patient in the morning is well soaped and rubbed, and remains in an ordinary bath one hour. He is then enveloped in sheets, kept satu-

rated with water until the next morning, when he takes another bath. The same general plan is employed for the facial exanthem. Prolonged maceration, with any innocuous ointment, as soon as the first efflorescence appears, with intent to prevent separated efflorescences, is practised. Usually, unguentum diachyli is used.

Personal.—Klebs has left Prague, the seat of his greatest scientific labor for the past nine years, for Zürich.

Billroth, accompanied by two assistants, Drs. Wölfler and Gersuny, left Vienna in the early part of the week for Bordeaux, to perform his operation of gastric-resection upon the person of a distinguished citizen of that city.

Chvostek, Drasche, and Schrötter are nominated as candidates for the chair made vacant by Duchek's death.

Eppinger will probably succeed Klebs in Prague. Chiari, thrown out of his position in Vienna by the election of Kundrat to the Chair of Pathological Anatomy, is expected to go to Innsbruck. Weichselbaum is named as Kundrat's successor in Graz.

Dr. Emil Zuckerkandl, Extraordinary Professor of Anatomy in Vienna, has been appointed Ordinary Professor of Anatomy in Graz. Zuckerkandl's brilliant anatomical career is the subject of much comment. His earlier anatomical studies were directed by Hyrtl and Rokitansky, personally. His first more important work, upon the skull obtained in the Novara expedition, is familiar to Americans. Within the last two weeks, the first volume of a great anatomical work upon the nose, has appeared. As a teacher, he is one of the most attractive in the Vienna medical school.

Upon March 14, in Trieste, Dr. Sampeo, a Brazilian, and Professor in the Poliklinik, in Rio, committed suicide by shooting himself. The bullet penetrated the left ear and lodged in the brain. The victim survived eighteen hours. Dyspeptic melancholia is assigned as the motive of the act.

Prof. Bamberger recommends Kretschy, a former assistant, as Duchek's successor.

The New York Code of Ethics.—At a meeting of the Fountain County (Ind.) Medical Society, held on the 6th of April, 1882, Dr. George Rowland introduced the following preamble and resolutions, which were unanimously adopted:

Whereas, We, the members of the Fountain County Medical Society, have noticed, with deep regret, that the Medical Society of the State of New York, at its recent meeting in February last, established a new code of ethics which is in direct conflict with the code of ethics of the American Medical Association; therefore

Resolved, First, That all the changes and mutilations made by the Medical Society of the State of New York in the laws and ethics established by the American Medical Association are unnecessary, unauthorized, unwise and mischievous, and deserve the condemnation of all good men in the medical profession.

Second, That the asserting of the right to "meet in consultation legally qualified practitioners of medicine," without further qualification, is directly at war with the code of ethics established by the American Medical Association, and has a tendency to break down the barrier between the learned and scientific physician and the vain and ignorant charlatan. We all know that amongst the "legally qualified physicians," of every State of the Union, are to be found the most arrant quacks and mountebanks, and that by thus giving them this equality, we thus give them countenance and respectability and enable them to ply their nefarious vocation with injury to the public.

Third, That the code of ethics of the American Medical Association is above State organization, and that all physicians who are members of the American Medical Association, or who belong to societies in affiliation with that body, are bound by its obligations and restrictions and amenable for violation of its laws, and it is unwise to disturb a custom which has been approved by the wisdom and experience of ages.

Fourth, That, as the action of the Medical Society of the State of New York is without a precedent for this strange departure, we trust it may have no following, and that we deeply sympathize with the noble minority who fought against the cruel action of the majority.

At a meeting of the Lancaster County (Pennsylvania) Medical Society, held April 5, Dr. John L. Atlee called attention to the recent action of the State Medical Society of New York in altering the code of ethics adopted by the American Medical Association, which code is obligatory upon the members of all State and county medical societies in affiliation with the American Medical Association.

After some prefatory remarks, he read to the society, from The Medical News of March 25th, the resolutions of the Montgomery County, Alabama, Medical Society, introduced by Dr. Wm. D. Baldwin, ex-President of the American Medical Association, condemning the conduct of the New York State Medical Society at its meeting in February last. Dr. Atlee concluded his remarks by moving the adoption of the Alabama resolutions as the sense of this society. After further remarks by Drs. Carpenter, I. L. Ziegler, President of the Pennsylvania State Medical Society, and Dr. Craig, the preamble and resolutions were unanimously adopted, and the society's action was ordered to be sent for publication in The Medical News.

The Public Health.—The following data, not hitherto reported, are given for the *week ending April 1*. The returns for the week show 5 new cases of *small-pox* in Brooklyn; 17 deaths in New Orleans; 3 each in Hudson Co., N. J., and Richmond, Va.; 2 in Omaha, Neb.; and 1 each in the District of Columbia and Detroit. From *cerebro-spinal meningitis*, 2 deaths each in Hudson Co., N. J., Buffalo, and Detroit; and 1 death each in Salt Lake City and the District of Columbia. There were 12 deaths from *croup* in Brooklyn; 4 in Buffalo; 3 in Hudson Co., N. J.; 2 in Detroit; and 1 in the District of Columbia. *Diphtheria* caused 15 deaths in Brooklyn, the same as in the preceding week; 7 in Hudson Co., N. J.; 5 in Detroit; 4 in Buffalo; 3 in Davenport; 2 in New Orleans; and 1 each in Charleston and Vicksburg. From *typhoid fever* there were 3 deaths in Hudson Co., N. J.; 2 each in Buffalo, Detroit, and New Orleans; and 1 each in Brooklyn, the District of Columbia, and Richmond. From *scarlet fever*, 26 deaths in Brooklyn; 8 each in Hudson Co., N. J., and Buffalo; and 2 each in Detroit and Vicksburg. From *measles*, 7 deaths in Brooklyn; 3 in Hudson Co., N. J.; 2 in Buffalo; and 1 in Detroit. From *whooping-cough*, 3 in Brooklyn; and 1 each in Buffalo, and Shreveport, La. *Consumption* caused 34 deaths in Brooklyn; 14 each in New Orleans, and Hudson Co., N. J.; 4 each in Buffalo, Detroit, and Richmond; 12 in the District of Columbia; and 1 each in Vicksburg, Omaha, Neb., and Shreveport. There were 32 deaths from *pneumonia* in Brooklyn; 23 in Buffalo; 17 in Hudson Co., N. J.; 16 in the District of Columbia; 5 in Richmond; 4 each in New Orleans and Detroit; 2 each in Vicksburg and Omaha; and 1 in Shreveport, La.

For the *week ending March 25*, there were reported in San Francisco, 2 deaths from cerebro-spinal meningitis; 4 from diphtheria; 3 from typhoid fever; 9 from measles; 2 from scarlet fever; 20 from consumption; and 18 from pneumonia.

For the *week ending April 8*, the principal causes of death in a number of prominent places throughout the country were as follows:

Small-pox.—This disease is on the increase in Cincinnati, where 50 deaths occurred during the week. This is an increase of 13 over the number reported the preceding week, and the highest number reached during the present epidemic. It is also on the increase in New Orleans, where the mortality for the week was 17. There were 8 deaths in New York City; 11 in Philadelphia; 13 in Chicago; 11 in Pittsburg, with 17 new cases; 1 in Boston, and 2 new cases; 2 in Memphis; and 1 each in Louisville and Camden, N. J. The epidemic still continues in South Bethlehem, Pa. Up to the 10th of April there have been reported 293 cases, of which 82 have died. The population of the town is about 5,500. A number of new cases have been reported in Bethlehem proper during the week.

Cerebro-spinal Meningitis.—New York City reports 5 deaths; Chicago, 3; Louisville and Indianapolis, each 2; and Philadelphia, Boston, Cincinnati, Providence, New Haven, and Nashville, each 1 death.

Croup.—This disease caused 26 deaths in New York City; 11 in Philadelphia; 2 each in Boston and Louisville; 7 in Chicago; and 1 in Cincinnati.

Diphtheria.—There was an increase in the number of deaths from diphtheria in Boston, and a very marked increase in the number of new cases (32). There were fewer deaths reported in New York City, Philadelphia, and Cincinnati. The returns for the week are as follows: New York City, 38 deaths; Philadelphia, 11; Chicago, 11; Boston, 10; Somerville, Mass., 5; Cincinnati, 2; and Providence, R. I., Indianapolis, and Dayton, O., each 1 death.

Scarlet Fever.—A decrease in the number of deaths from this disease is noted this week. The following is the record: New York City, 65 deaths; Philadelphia, 5; Boston, Cincinnati, and Cleveland, 2 each; and Portland, 1 death. Six new cases were reported in Boston. At Cressona, a small place in Pennsylvania, it is reported that malignant scarlet fever has made its appearance, and caused within a few days six deaths.

Typhoid and Typhus Fevers.—There was only 1 death reported from typhoid fever in New York City; 16 in Philadelphia; none in Boston, but 7 new cases; 6 in Cincinnati; 3 in Mobile; 2 each in Dayton, O., Indianapolis, and Memphis; and 1 each in Portland, Providence, New Haven, Nashville, and Augusta. From typhus fever, 6 deaths were reported in New York City, an increase of 3 over the preceding week.

Malarial Fever.—Malarial fever caused 12 deaths in New York City; 3 in Philadelphia, and 1 in Louisville.

Measles and *Whooping-cough.*—Neither of these diseases are very prevalent. In New York City, there were 29 deaths from measles, compared with 44 in the preceding week; 11 in Chicago; 8 in Philadelphia; and 2 in Louisville. Whooping-cough caused 13 deaths in New York City; 3 in Chicago; 2 each in Philadelphia and Boston; and 1 in Providence.

Consumption and Pneumonia.—The deaths from consumption were as follows: New York City, 109, the same as last week; Philadelphia, 64; Boston, 33; Cincinnati, 20; Chicago, 20; Louisville, 11; Pittsburg, 5; Providence, 5; Memphis, 5; New Haven, 4; and Dayton, 3; Portland, Indianapolis, Nashville, and Jacksonville, each 2 deaths. From pneumonia there were 84 deaths in New York City; 54 in Philadelphia; 33 in Chicago; 19 in Boston; 17 in Cincinnati; 9 in Pittsburg; 8 in Providence; 6 in Louisville; 5 in New Haven; 3 in Indianapolis; 2 in Dayton, and 1 each in Portland, Nashville, Memphis, and Augusta. The deaths from consumption have generally fallen off. Those from pneumonia have also shown the same tendency, except in Philadelphia and Cincinnati, where the increase was very pronounced.

Health in Michigan.—The bulletin of the Board of Health states that for the week ending April 1, 1882, the reports indicate that rheumatism, inflammation of bowels, and neuralgia have increased, and that diarrhœa, scarlet fever, tonsillitis, consumption of lungs, and membranous croup have decreased in area of prevalence. Small-pox is reported at 6 places, as follows: in Everett township, Newaygo Co. (3 cases), and at Grand Rapids, March 28; at Milford (4 new cases), March 30, and one new case reported April 5; in Geneva, Van Buren Co., at Battle Creek (2 new cases), and at Detroit (2 cases), April 1, 1882.

Vaccination.—In the German army from 1873 to 1879 there were only 96 cases of variola, and no deaths. But this is explained by the fact that all the men incorporated are vaccinated five or six times.

Personal.—The honorary degree of Doctor of Medicine has been conferred by the College of Professors of the University of Vienna on Herr Ludwig, the professor of chemistry in the university, in recognition of his eminent services to science and to education.

Medical Literature in Japan.—The return of works licensed to be printed during the past two years by the Japanese Department of the Interior shows that last year there were 267 works on medicine, against 229 the previous year. Many of these books are translations or adaptations of European or American works. —*Med. Times and Gaz.*, March 25, 1882.

What is said of the New York Code of Ethics.

The New York *Medical Record* and the *N. Y. Medical Journal* both favor it, of course. With these exceptions, we have not seen a single journal—from north, south, east, or west—that did aught but condemn the action in no uncertain sound. And these utterances are the true index of the feelings of the profession. Fifty-two doctors at Albany, reckless of honor but greedy for gold, undertook to sell out the regular profession; but only succeeded in selling themselves—and very cheap at that. The wise Confucious says: "He who seeks gold more than honor, is likely to lose both gold and honor." The fees which those men hoped for they will not get, while the honorable name which has been heretofore accorded to them is theirs no longer.—*Ohio Medical Journal*, April, 1882.

It is with considerable satisfaction that we record the unanimous disapproval and condemnation of the action of the New York State Society by the entire medical press. It is a powerful earnest that honorable medicine will not allow itself to be tainted by affiliation with humbuggery in any of its protean shapes. We hope the voice of every honorable practitioner will be raised in strong denunciation of this unheard-of action of an old society, and that the tide of condemnation will soon be so great as to turn our erring brethren of the Empire State from their fatal course.—*Nashville Journal of Medicine and Surgery*, April, 1882.

By the action of the New York State Medical Society, there is a complete surrender to homœopathy by the members of that Society. These men have been crying out "quacks," "quacks," when speaking of homœopathy for years, and "turning up their noses" in contempt; but now in their Society they style them "legally qualified practitioners of medicine," and assert the propriety of consulting with them. Oh, consistency, thou hast not thy dwelling-place in man! To-day he exclaims with indignation, "Is thy servant a dog that he

should do such a thing?" and to-morrow he proceeds deliberately to do it, and takes merit to himself for doing it. We have nothing to say against homœopathists, and never had. We respect the honest homœopathist who sincerely believes in his dogmas, but we have little respect for the majority of the men of the New York State Medical Society.—*Cincinnati Medical News.*

In effect, it approves of any of the members of that Society, and others in affiliation therewith, when they meet in professional comity persons of the class considered heretofore as outlaws, such as the legally qualified and avowed Thomsonians, Electropsychic healers, faith-conjurers, and all the "pathists" who publish some narrow dogma as the sole rule of their practice. As if to bolster this illogical provision with the sanctions of heavenly charity, there follows a clause which intimates that certain emergencies may arise when a doctor who insists upon the reasonableness and propriety of the rule of life adopted by his guild may be open to the charge of inhumanity. . . . There is small hazard in the conjecture that this Society will take the stand that we wrong ourselves, and worse still, wrong society by countenancing these pretensions.—Dr. J. W. Holland, in *President's Address before the Kentucky State Medical Society*, April 5, 1882.

Far from being in the wrong, the profession of this State have taken a much-needed step in advance. . . . We repeat, that the Medical Society of the State of New York has done nothing of which it may be ashamed. It can take nothing back, so far as freedom of consultation is concerned. The stand taken is an eminently proper one, and we hope it will be persistently maintained, even at the risk of non-representation in the American Medical Association. It will, in any event, be only a question of time for the Association itself to follow the example of the Society of this State.—*Medical Record*, April 8, 1882.

NOTES AND QUERIES.

DELIVERY BY CRANIOTOMY.

To the Editor of THE MEDICAL NEWS.

SIR: After a perusal of the statement appended to the paper on "Cæsarean Section," by Dr. McClellan, in the *American Journal of the Medical Sciences* for April, 1882, I feel encouraged to send you an account of two cases which occurred in my practice. I was called about 3 o'clock P.M., in the fall of 1869, to a colored woman near Charlotte Hall, who, it was said, had been in active labor since some time during the previous day, and was requested to deliver the after-birth. A child was then lying dead on a table in the room. I found, upon examination, another child, with an arm, the head, and a foot forced, and held by powerful uterine contractions deep into the excavation. After the various manipulations advised for such a procedure were resorted to, considering that the woman was rapidly passing into a state of hopeless exhaustion, I told her husband and two white women who were present that the only way to effect a delivery was by opening the child's head and turning it around. Having no instruments, I readily cut through a fontanel with the large blade of a pocket-knife, which was furnished by the man; and then, breaking up the brain and scooping it out with my fingers, I seized the head between my fingers and thumb and readily compressed it. I then drew down the prolapsed foot, and tied a strong ligature around it, and gave this to the midwife to prevent this foot from slipping up while I secured the other one. The woman made a good recovery, and afterwards gave birth to twins.

To the second case (also colored): I went about 8 o'clock P.M., June 30, 1878. I found the woman with strong pains; child's arm and head deep deeply engaged and held as if in a vice. After trying for an hour or so to make a favorable change, the woman went into a convulsion, when I proceeded to deliver as on the previous occasion. She also readily recovered with no accident, excepting difficulty in urinating for a few days. I used a considerable amount of force in making traction by the feet in both of these cases.

Yours, respectfully,

WILLIAM A. MARBURY, M.D.

AQUASCO, MD.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 4 TO APRIL 10, 1882.

GREENLEAF, CHAS. R., *Major and Surgeon.*—Relieved from duty in Department of Dakota, to proceed to New York City, and, on arrival, report by letter to the Surgeon-General.—*S. O. 78, A. G. O., April 5, 1882.*

WOODHULL, A. A., *Major and Surgeon.*—Now awaiting orders. To report in person to the commanding officer of the recruiting depot, David's Island, New York Harbor, for duty at that post.—*S. O. 78, C. S., A. G. O.*

WILLIAMS, JNO. W., *Major and Surgeon.*—Relieved from duty in Department of the Missouri, to proceed to Washington, D. C., and report to the Surgeon-General.—*S. O. 78, C. S., A. G. O.*

WATERS, W. E., *Major and Surgeon.*—Relieved from duty in Department of Texas, to proceed to Washington, D. C., and report to the Surgeon-General.—*S. O. 78, C. S., A. G. O.*

JAQUETT, G. P., *Major and Surgeon.*—Relieved from duty at David's Island, New York Harbor, to proceed to his home and report by letter to the Surgeon-General.—*S. O. 78, C. S., A. G. O.*

BROWN, J. M., *Major and Surgeon.*—Relieved from duty in Department of the Missouri, to proceed to Cincinnati, Ohio, and, on arrival, report by letter to the Surgeon-General.—*S. O. 78, C. S., A. G. O.*

CLEARY, P. J. A., *Captain and Assistant Surgeon.*—Relieved from duty in Department of the East, and, on expiration of his present sick leave of absence, to report by letter to the Surgeon-General—*S. O. 78, C. S., A. G. O.*

CRONKHITE, H. M., *Captain and Assistant Surgeon.*—Granted leave of absence for four months, from June 1, 1882.—*S. O. 80, C. S., A. G. O.*

CARVALLO, CARLOS, *Captain and Assistant Surgeon.*—The extension of his leave of absence on surgeon's certificate of disability granted him in S. O. 256, November 12, 1881, from A. G. O., is still further extended six months on account of sickness.—*S. O. 80, A. G. O., April 7, 1882.*

LAUDERDALE, J. V., *Captain and Assistant Surgeon.*—Having reported by letter to these headquarters, is assigned to duty at Fort Sully, Dakota Territory, to which post he will proceed and report for duty.—*S. O. 47, Department of Dakota, March 27, 1882.*

MOSELY, E. B., *Captain and Assistant Surgeon.*—Relieved from duty in Department of the Platte, to proceed to New York City, and, on arrival, report by letter to the Surgeon-General.—*S. O. 78, C. S., A. G. O.*

MAUS, L. M., *Captain and Assistant Surgeon.*—Relieved from duty at David's Island, New York Harbor, and to report in person to the Commanding General of the Department of the Missouri for assignment to duty.—*S. O. 78, C. S., A. G. O.*

KILBOURNE, H. S., *Captain and Assistant Surgeon.*—Relieved from duty in Department of the East, and to report in person to the Commanding General of the Department of Dakota for assignment to duty.—*S, O. 78, C. S., A. G. O.*

TAYLOR, M. E., *Captain and Assistant Surgeon.*—Relieved from duty in Department of the Missouri, to proceed to St. Louis, Mo., and, on arrival, report by letter to the Surgeon-General.—*S. O. 78, C. S., A. G. O.*

SPENCER, WM. G., *Captain and Assistant Surgeon.*—Granted leave of absence for four months, with permission to apply for an extension of two months.—*S. O. 80, C. S., A. G. O.*

CORBUSIER, W, H., *Captain and Assistant Surgeon..*—Now awaiting orders. To report in person to the Commanding General of the Department of the East for assignment to duty.—*S. O. 78, C. S., A. G. O.*

CUNNINGHAM, T. A., *Captain and Assistant Surgeon.*—Granted leave of absence for fifteen days, to take effect on arrival of Assistant Army Surgeon Actand at Mt. Vernon Barracks, Alabama.—*S. O. 40, Department of the South, April 3, 1882.*

DAVIS, W. B., *Captain and Assistant Surgeon.*—Now awaiting orders. To report in person to the Commanding General of the Department of the Platte for assignment to duty.—*S. O. 78, C. S., A. G. O.*

CHERBONNIER, A. V., *Captain and Medical Storekeeper.*—Granted leave of absence for four months, on surgeon's certificate of disability.—*S. O. 77, A. G. O., April 4, 1882.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

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ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE PORTAL SYSTEM:

ITS ANATOMICAL AND PHYSIOLOGICAL RELATIONS TO THERAPEUTICS, AND TO AFFECTIONS OF THE STOMACH, INTESTINES, LIVER, AND SPLEEN.

BY F. PEYRE PORCHER, M.D.,

PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS IN THE MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA, CHARLESTON.

GENTLEMEN: There are many climates, zones, and special localities where the liability of the liver and spleen to become affected is far greater than in others. These are tropical, semi-tropical, and malarial regions, and those subject to great variations of temperature. There are many conditions peculiar to the individual, or the people; habits of life, imprudences, excesses in eating and drinking, exposures to wet and cold, to miasmatic influences, etc., which lead to such affections. The liability to, and the ill effects of, these can be escaped if they are made known and explained, and we believe that this can be done so that it will be intelligible to the commonest mind. But to this knowledge, and as essential to a fuller understanding of the subject, it is necessary that there be added some acquaintance with the position, structure, and functions of the organs specially treated of in this lecture.

The first step in diagnosis is to have clearly in the mind's eye the several diseases to which an organ is subject. We will begin with the liver, and enumerate some of the affections to which it is specially liable, that some idea may be formed in advance of its morbid states, whether these consist simply in a temporary derangement or a grave disease of the organ. Either condition is always more or less obvious to the senses of sight or touch, or is indicated by the feelings of the sufferer. Among the most prominent of these are: Enlargement; congestion (acute or chronic); inflammation of the liver (hepatitis); gin-liver, hob-nailed liver of drunkards (cirrhosis); catarrhal affections of the stomach and liver; syphilitic disease of the liver; tumors, whether cancerous, fatty, or simple, and which, also, by their pressure upon its vessels, cause: Dropsy of the abdomen and lower extremities; watery enlargements of the liver (hydatids); bilious colic, caused by accumulations of gall-stones in the gall-bladder, or their forcible escape through its ducts, giving rise to acute pain. There are, also, various degenerations of the organ, fatty or other, with impairment of its size, structure, or functions.

Causes of Diseases of the Liver.—These states or forms of diseased liver are caused by, or result severally from: Excess in eating and drinking, which produce injurious fulness, repletion, or inflammation of the organ; malarial fevers, intermittent or remittent (so-called bilious); catarrhal affections, beginning in the stomach or intestines, and extending to the liver; contamination of the blood which circulates in the organ from the absorption of the matter of dysenteries or of syphilis. Sometimes attacks of jaundice of a very distressing character, and accompanied by extreme prostration, occur, without apparent cause, in special individuals; at times these are epidemic in their nature; at other times becoming frequent in particular localities—among bodies of troops, in camps, or during certain unfavorable atmospheric conditions. Tendencies derived from our progenitors, impurities of the blood, the poison of consumption (tuberculous matter) absorbed into the system, etc., manifest themselves by tumors, swellings, hardness, and other evidences of disease which affect this organ, in preference to others, for reasons which will be shown hereafter.

A form of dropsy (called hepatic) is not infrequent, caused by tumors, or interstitial growths in the substance of the liver, pressing upon its veins and squeezing out the watery parts of the blood, which thus accumulate in the cavity of the abdomen, or settle in the legs. The same condition results from gin-drinker's, or drunkard's, liver; likewise from diseases of the heart or kidneys, but when these are implicated the dropsy is often noticed in the face. It may also occur as a result of weakness following protracted fevers, when it is more amenable to treatment.

Symptoms.—The most prominent and ordinary symptoms of disease of the liver are: Swelling, enlargement, hardness, pain limited to a small space, or diffused over the whole organ (deep-seated or superficial), pain being sometimes felt in the shoulder. The pain is caused by inflammation, tumors, cancerous growths, abscesses, etc.

The above symptoms, or many of them, are accompanied by fever, nausea and vomiting, want of appetite, indigestion (dyspepsia), dejection of spirits or decided melancholy, a general failure of energy, and a disinclination to exertion, mental or bodily. The general hue of the skin, specially of the face, is what is called "bilious," the face being heavy and dull, as if stained with bile, and often slightly swollen or bloated.

We will now endeavor to show *why* it is that the liver is so liable to become diseased, why it has so important an influence upon other portions of the body, and also their intimate relations with it. In the popular view, and often we believe not without reason, the seat, or the offending cause, of very many of the ailments affecting mankind, and the origin of very many troubles, mental or bodily, are readily referred, whether correctly or incorrectly, to derangements of this organ. We may be allowed to say that, having long had our attention attracted to this subject, with ample experience in charge of hospitals at the South, and in teaching medicine to students at the bedside, we hope to be able to offer some explanations, and to point out the extremely important functions and relations of this organ, by a method which we have never seen presented fully by any writer.

This, the largest gland, or blood-making and blood-purifying organ in the body, lies in the very path, midway between the stomach and intestines and the heart and lungs. All the large vessels (veins) coming from the stomach and intestines, with scarcely an exception, unite in one trunk, and go into the liver; and this was, therefore, called by the ancients (who understood its importance) the Portal vein (vena portæ)—the great gate-way, or portal of entrance, into the system. It might well have been distinguished as the "Grand Trunk." The reason for the high importance of this central canal is, that it carries a rich stream of nutritive matter into the heart of the system. But there are, besides, anatomical and physiological considerations connected with it; and some diseases, with the production of which this canal is so intimately concerned that

we must briefly invite attention to an explanation of their relations.

The intestines of an adult of ordinary size, though packed away in a very small space, are over thirty-six feet long—or six to eight times the length of the body, and possess about 14,000 square inches of surface. They consist of an enormous glandular apparatus—secreting and excreting, but possessing no special absorbent vessels.[1] Over the entire stomach and intestines, throughout their whole length, there circulate countless myriads of veins (the gastric, superior and inferior mesenteric, and hæmorrhoidal), subdividing, ramifying, and encircling their walls—but these veins never penetrate through their coats, nor with open mouths dip into their interior. Through the walls of these veins, though at their origin infinitely small, is carried by imbibition—as water or other fluid will pass through the insensible pores of a membrane—all the food which has been swallowed, and which the solvent juices of the mouth, stomach, and upper intestines (those of the stomach being strongly acid) have *digested* and prepared for the nourishment of the body. We say that all every portion of this highly nutritious material upon which our life depends (save oils and fatty matters)—having penetrated, by endosmotic action, into the interior of these numerous and widely disseminated congeries of veins, which converge into one channel (the portal canal), is carried directly to the liver. We can compare these veins, thus filled with nutritive material, to the countless rills which flow from mountain, plain, and valley, draining a wide campagna, and gathering the elements of fertility from every quarter, till they unite in one full stream, to pour into the ocean their rich and various stores.

When these products of stomach and intestinal digestion reach the liver, they undergo certain other digestive changes, which we need not describe fully or in detail, saying only that the starchy matters contained in the food, acted on by the diastase of the saliva and pancreatic juice, and changed to dextrine and sugar, are further converted in the liver into glycogen, a body allied to the dextrines, and again reconverted into sugar, which latter is serviceable in heating the body. The materials derived from flesh, meats, etc., which had been already digested, as was stated, in the stomach and intestines, go to make up the elements of the *blood;* they furnish what Dr. Gull, of St. Bartholomew, aptly calls the "raw material of the blood." They then pass out of the liver to the vena cava ascendens, to reach the heart, from whence they are sent to the lungs (that they may be exposed, by a similar endosmotic action, to the action of the air), to be again returned to the heart. We all know that this is the great tireless central engine for forcing through the arteries this blood elaborated from the food, thus doubly enriched (by the nutritive elements of the food and by the oxygen of the air), and suited for the repair and nourishment of every portion of our frames. But before the blood has left the liver, bile had been extracted from it, a portion of which is retained in its proper reservoir, the gall-bladder, whilst a portion finds its way back into the intestines, to assist, after its own special manner, in the intestinal digestion, namely, in conjunction with the pancreatic fluid, the breaking up and emulsionizing of fatty materials of the food, which ultimately passes into the thoracic duct, and reaches the heart by a different channel.

So that even the most uninstructed need not be told now that those veins which go to the liver, as described above, are not, strictly speaking, *veins*, like the rest of the veins in the body, carrying dark, used-up blood to the heart, as, with a single other exception, all the veins do. These liver veins contain some of the very richest material in the body, gathered, as we have shown, from the food in the stomach and the whole tract of the upper intestines, which man has swallowed to gratify his natural and proper wants, or his greediness. If he habitually takes too much food, the liver is overtaxed as well as the stomach, and he becomes overfat, or suffers from enlargement of the organ, from dyspepsia, indigestion, headaches, etc.; but of this more anon.

It must be remembered that all this rich contribution made by the stomach and intestines to the veins which penetrate the liver, is not only *food* of every variety and description (with the exceptions made), digested flesh or fish, breads, vegetable substances, fruits, sweet and sugary matters, grains, etc., but besides all these, all the *fluids* we drink take the same course, and enter the liver with the other digested substances. These drinks may be and are, water, spirits, wines, syrups, and, be it observed, anything capable of solution by the juices of the stomach, or dissolved in the spirits, wine or water, namely, poisons or medicines—whether fluid or solid, mineral or vegetable, powders or liquids—all, save oily and fatty substances, pass straightway to the liver. A glass of wine or a cup of tea which has been swallowed, and which affects the head in half a minute, or the kidney in a very brief space of time, has passed through this portal vein, and has entered the liver to reach the heart. That wine may contain medicines or poisons, ingredients of any kind, beneficial, or hurtful—all take the same route through the liver.

We can now readily understand the vast importance of this great gland, or viscus, as it has been called, in the economy of the system, and what it has to do, whether healthy or diseased, with our food, our drink, our nourishment, or our *cure*, for through its instrumentality and grace to its marvellous functions, we depend upon it for health and strength, as well as for transmitting, and to a certain extent modifying, all the remedial agents which the physician, in his best judgment, deems necessary for the cure or relief of the sick.

In this preliminary narration of facts, which we hold to be essential to any proper understanding of the subject, we have also to state that both the stomach, and intestines, and the liver, each in turn, reciprocally react upon the other, and when the rules of life or the teachings of common sense are violated, or when disease invades one of them, the other is liable to suffer through means of this very circulatory arrangement—this interdependence which we have been describing. Thus, a cold falling on the stomach and intestines, and causing the pouring out of a large amount of mucus, or a dysentery (bloody flux accompanied with matter and disorganized blood), may impair or poison the blood which goes to the liver. Or, on the other hand, if the liver is diseased, enlarged, congested, it fails to give passage, as in health, to the blood, and the rich intravenous material which is taken to it, its channels of entrance or exit are blocked up, the blood flows back, and the said venous contents regurgitate, we may say, upon the already diseased, or the healthy stomach and intestines, causing congestion of them, deranging their own proper functions: giving rise to repletions, to indigestions, to looseness of the bowels, to dysentery, or other disturbance.

We may add that the spleen also suffers if the liver is blocked up, for the only other veins which go to the

[1] In M. Foster's Text-book of Physiology, 3d Eng. edition, 1880, he says of the "Entrance of the Chyle into the Lacteals:" "The lacteal begins as a club-shaped (or bifurcate) lymphatic space lying in the centre of the villus, and connected with the smaller lymphatic spaces of the adenoid tissue around it; it opens below into the submucous lymphatic plexus, from which the lacteal vessels spring. . . . . That the finely divided fat does pass from the intestine, through the epithelial envelope of the villus, into the adenoid tissue, and so into the lacteal chamber, is certain; but much discussion has arisen as to the exact mechanism of the transit." So whether there is true absorption, or osmosis, is uncertain.

liver with the stomach and intestinal veins are those which come from the spleen. So that we may remark, once for all, that the spleen is similarly liable to be affected by obstructive diseases of the liver.

Besides colds (catarrhs), dysenteries, and congestions of the stomach and intestines, which are caused or increased by diseased conditions of the liver, we must notably call attention to the extreme lower portion, likewise, of the bowels—the rectum and fundament. These parts of the bowel are enormously supplied with veins, of which the superior hæmorrhoidal enters the portal canal and goes to the liver. They bleed, consequently, when in trying to make their way through that organ their path is obstructed; the blood in them flows back, engorges, swells up the vessels of the lower intestines, and we have bleeding piles. We can readily understand, then, why, though the lower bowels and rectum are far removed from the liver, they sympathize thus powerfully with that organ, and how such medicines as calomel, blood-root (sanguinaria), mandrake (podophyllum resin), taraxacum, soda, epsom salts, etc. (which act upon the liver or the intestines by stimulating their secretions and thus emptying them), relieve dysenteries, colds of the stomach (catarrhs), dropsys, hæmorrhoids,—or other intestinal diseases caused by congestion or engorgement, or arising from whatever influences.

Medicines, or local means also, which act specially in emptying the lower bowels—aloes, epsom salts, etc.; the application of leeches, enemata, etc., naturally have the power of relieving plethora or engorgements of the liver. If the heart or lungs also are diseased or congested, the liver is unable to empty itself properly,—so that it also sympathizes with these organs.

Dr. L. F. Warner, of Boston, in a paper published by him and also in a letter to us, contends that portal congestion as a clinical fact always "intensifies if not causes pelvic congestion," and he advises medicines acting on the liver to relieve the uterus. Dr. Montrose Pallen is of the same opinion. It appears to us that the uterine organs disgorge their venous blood much more fully through the vena cava ascendens, and thus escape much complication with the liver.

In "Gross's Journal," as far back as 1857, it was stated that sterility in women was often dependent upon fissure, hæmorrhoids, and disease of the rectum, because of their mutual relations with the uterus—both organs being supplied with blood from the internal iliac artery, and by the sacral plexus of nerves. A venous and arterial symmetry is generally preserved in every organ, and so we argue that the uterus is not emptied by the hæmorrhoidal or mesenteric veins.

The following is a very practical and popular consideration, to which we invite special attention on account of its exceeding importance in its effects upon the welfare of a very large number of persons. It flows, too, directly from the very explanation we have been offering. It is this: that the danger of our acquiring diseased livers, of their becoming overtasked and engorged—which, when they occur, we have shown to produce such widespread, remote, and disastrous effects upon the stomach, intestines, fundament, and spleen—depends upon the care we use with regard to *food* and *drink*. *First—of food:* Gluttony and continued excess, high living in the adult, overfeeding in the young, overtask the digestive organs, especially the stomach and the liver, causing colic, atrocious pains,[1] etc. The danger and the ill-consequences are greatest in hot climates and during the hot seasons of the year, when, as is notoriously the case, we find diarrhœas, dysenteries, cholera infantum, etc., much more prevalent and fatal. The remedy is obvious. We believe that continued excesses in eating—any habits approaching to gluttony or debauch—by overloading and overstimulating these organs, also intensify greatly the grade of bilious (remittent) fevers, and render them much less amenable to treatment by quinine, etc. This is because a condition of excessive irritation or plethora (and perhaps of inflammation) of the stomach, intestines, and liver, is added to what would otherwise have been simply an uncomplicated attack of intermittent (malarial) fever. Were it not for these excesses, organs so important would have been sound and healthy, and therefore more ready to respond to our remedial agents, and better able to resist and expel the poison causing the fever. In the irritation of the stomach, intestines, or liver induced by such over-indulgence will, we believe, be found the *exciting cause* of the attack; and though the resulting fever be malarial in its essence, it is the repeated and prolonged over-indulgence in highly spiced, stimulating, and rich food which aggravates it, and also renders it more difficult of cure—because we have the stomach or intestinal irritation added to the malarial poison to be eradicated.

Influence of drinks; action of alcohol upon the liver.—Excesses in the use of stimulants, liquors, wines, etc., in warm climates such as ours (at the South), are after all the greatest cause, overshadowing every other, and far more productive of evil than all the rest combined, in producing and intensifying the tendency to disease of the stomach and intestines, and especially the liver. All know how widespread and baneful is the habit—sapping literally the *life-blood* and destroying the health, strength, and happiness, moral and physical, of countless thousands. This is now easily comprehended; because when too great and long-continued indulgence in spirituous liquors is allowed, the liver especially, as the great organ for their passage to the heart and lungs, becomes inflamed, swollen, indurated (hob-nailed); the skin, lungs, heart, and brain become embarrassed; and the whole train of deplorable consequences ensue. What our distinguished friend, the late Prof. S. H. Dickson, remarked of one of the diseases met with here (yellow fever), we may justly apply to many others: "There is no hope for the drunkard!" The red, congested, and inflamed stomach and intestines, the swollen, bloated, or hardened liver sufficiently declare the dangers of such over-indulgence, especially to those living in hot and miasmatic regions. We shall be contented, if we are permitted thus incidentally to record our opinion of the extreme dangers of intemperance, whilst we show plainly the reasons for it.

[1] The famous bishop, Jeremy Taylor, says somewhat forcibly, in his "Holy Living and Dying:" "Whereas to gluttony, *the pain of watching and choler, the pangs of the belly*, are continual company."

ORIGINAL ARTICLES.

SUPRA-MALLEOLAR OSTEOTOMY,

FOR OUTWARD DEVIATION OF THE FOOT, SUBSEQUENT TO POTT'S FRACTURE HEALED UP IN A BAD POSITION.

BY CHRISTIAN FENGER, M.D.,
OF CHICAGO.

(*Concluded from p. 401.*)

CASE III.—*Outward deviation of right foot of ten years' standing, from Pott's fracture—Operation—Five weeks later dressings removed—Seven weeks later can bear weight on foot—Complete recovery.* (Verity, Chicago, 1881.)

William B. W., a groceryman, fifty-three years of age, was admitted to Cook County Hospital, January 19, 1881, suffering from suppuration of the

metatarso-phalangeal articulation of the great toe of the right foot, caused by frost-bite.

The patient has for many years been addicted to the excessive use of liquor. During the past year he has taken from ten to twenty drinks daily. He has had syphilis. Ten years ago, while in Colorado, he sustained a Pott's fracture, which, in default of proper care, healed up in a bad position.

On admission, the patient was found to be well nourished. The right foot was turned outward at an angle of about thirty degrees.

February 22.—After the usual course of treatment preparatory to an operation for the restoration of the contour of the limb, the patient was anæsthetized with ether, and after the application of Esmarch's bandage, Dr. Verity, the house-surgeon, performed the operation. A longitudinal incision was made, beginning three inches above the internal malleolus, and extending to its extreme point. The soft parts were widely separated by retractors. A transverse incision was made through the periosteum, an inch and a half above the lower extremity of the tibia. Two longitudinal incisions, perpendicular to the first incision, were then made through the periosteum, making altogether an H-shaped incision. The periosteum was now carefully retracted, laying bare a portion of bone about an inch and a quarter long and half an inch in breadth. A base having first been marked out, a wedge-shaped piece of bone was cut out from the tibia with a hammer and chisel, the base of the wedge being inward, and the apex pointing outward at an angle equal to and compensating the angle of deformity. The cut ends of the tibia were now approximated and united by a heavy silver suture, the fibula having first been bored through in order to facilitate its fracture. A drainage-tube was inserted, the wound closed by aseptic silk sutures, and Lister dressing applied. Verity's modification of my osteotomy splint was now applied over a plaster-of-Paris cast, embracing the upper two-thirds of the leg and lower two-thirds of the thigh, the leg being flexed upon the thigh at an angle of about forty-five degrees, in order to give greater leverage, and prevent rotation of the foot, and the leg suspended.

The wound was dressed every two or three days, and healed kindly. The temperature reached 101° on only one occasion.

March 28.—Dressings removed. The patient can move around with the aid of crutch and cane.

April 10.—He can bear considerable weight on the foot.

20th.—He is able to walk with a cane, and has done some light work in the ward.

May 2.—At his own request the patient was discharged from the hospital, cured.

This supra-malleolar osteotomy is not any more or any less dangerous than osteotomy in any other location, and it is in the power of the operating surgeon to reduce the danger to a trifling minimum, by means of strict antisepsis.

As regards the method of operating we shall make the following remarks, based upon careful observations upon the cadaver, made by me prior to the performance of my first operation:

It is essential not to open the ankle-joint, that is, to have no communication whatever from the cut osseous surfaces, or even from the incision through the soft parts to the joint, for the following reasons: First, suppuration may take place when there is an osteitis in the bones operated upon, in spite of all antiseptic precautions; and, second, thorough drainage of the ankle-joint is so difficult that suppuration in this location cannot be combated with as great ease as in the knee-joint.

The operation has been so minutely described in the report of Case I., that recapitulation will be unnecessary. We shall therefore mention certain points only in regard to the operation.

The cutaneous incision we shall recommend to be longitudinal, two and one-half to three inches in length, in the middle of the medial surface of the lower extremity of the tibia (as was done in Dr. Verity's case). The transverse incision through the periosteum should be two inches above the apex of the internal malleolus. The two incisions in the periosteum perpendicular to that last mentioned, should be from three-quarters of an inch to an inch long. Care should be taken not to open the sheaths of the tendons of the tibialis anticus and posticus.

It is needless to state that the size of the base of the wedge of bone to be cut out depends on the degree of the deformity, but from the cases operated upon we think that from ten to fifteen millimetres will include the average width. It is advisable to define the base of the wedge by two transverse cuts through the cortical substance by means of a small saw, so as to avoid unnecessary splintering of the cortical substance by the chisel. In cutting out the wedge, care should be taken at the anterior and posterior cortical surfaces to avoid opening the sheaths of the tendons with the chisel.

It would be impossible to perform this part of the operation with perfect exactness, if we could not, by means of Esmarch's bandage, make the operation bloodless, but with the bandage and a good light this part of the operation can now be done with exactness, the sheaths of the tendons having first been retracted.

A common carpenter's chisel is preferable to the so-called surgical chisel, because the extremity of the latter forms the apex of an isosceles triangle, while the extremity of the former forms the apex of a right-angled triangle. The carpenter's chisel is the only one which permits the cutting out of a wedge of bone of the exact shape and size required.

The point of the wedge will be the cortical substance of the lateral surface of the epiphysis. This need not be divided, but should be simply fractured, as no osseous substance here needs to be removed.

The drilling of the fibula—at a point corresponding to the incision through the tibia, and which we wish to fracture—may be done through so small a cutaneous opening as to permit the passage of the drill only, and not to require drainage.

It requires a moderate degree of force, after the bones have been cut, to restore the foot to its normal position. If there is too much resistance, it is evident that either the chiselling of the tibia or

drilling of the fibula has not been sufficiently thorough, and, consequently, must be completed.

It is advisable to unite the cut surfaces of the tibia by a suture of heavy silver wire, because here, as in any other fracture, perfect immobility facilitates osseous union.

The main difficulty in the after-treatment is to keep the parts absolutely immobile, and, at the same time, permit the application of the necessarily voluminous antiseptic dressing. This was accomplished by the apparatus shown in Fig. 3, as devised by Dr. Verity and used in his case.

Fig. 3.

This consists of a broad leather band (1), secured around the upper part of the calf of the leg, outside of a plaster-of-Paris cast (2), extending from the middle of the thigh to the middle of the calf. The plaster cast prevents excess of pressure from tightening the leather band. A steel bar (3) extends down the posterior side of the leg, and has attached to it a movable foot-piece (4), which may be fixed in any desired position by means of screws (5). The foot is attached to the foot-piece by a plaster-of-Paris bandage (6). This apparatus allows, as will be readily seen, ample room for the antiseptic dressing (7), which can be changed without the least movement of the leg, which is suspended from a wooden frame. The adduction of the foot is further secured by a cord (8) from the inner side of the extremity of the foot-piece to the inner side of the leather band.

The cases above mentioned have demonstrated that supra-malleolar osteotomy is a justifiable procedure. First, because it perfectly restores the proper function of the foot, and second, because the inconveniences or dangers subsequent to the properly managed operation do not constitute an insurmountable barrier against the advantages obtainable.

It is to be hoped, however, that the indications for the operation will be more and more rarely met with, as deformity is avoidable by proper management of Pott's fractures. Not less than four cases of this deformity have applied for aid at Cook County Hospital within the last three years. (Dr. Gunn performed the operation in the fourth case.) It seems natural to conclude that such cases are, as yet, not so very uncommon. If this is the case, the operation may prove to be of some practical value, which will entitle it to a trial by the profession.

ANATOMICAL ANOMALIES.

By WILLIAM T. SMITH, M.D.,
Demonstrator of, and Assistant Lecturer on, Anatomy and Physiology in Dartmouth Medical College, Hanover, N. H.

A subject which came under my notice in the dissecting-room last winter, presented three anomalies worthy of record, one visceral and two muscular. It was the body of a colored man about sixty years of age, who had died apparently from the effects of an incised wound in the right inguinal region.

He had (1.) a horseshoe kidney. The glandular mass measured about six inches transversely, three vertically, and one inch in thickness. Its upper concave border lay across the 4th lumbar vertebra. Its convex border hung over the promontory of the sacrum, and dipped into the pelvis. The larger part of this semilunar body was the right kidney. A fissure indicated the line where the left was united like a small lobe to the inferior lobe of the right. This lobe, representing the left kidney, was undeveloped and had no hilum. A single ureter was found, and that on the right side.

The arteries were five in number, coming from the aorta below the inferior mesenteric and entering different portions of the mass. There were but two veins, both coming from the right end of the mass, and uniting in a common trunk before entering the vena cava. The organ presented externally no appearance of disease.

(2.) The flexor brevis digitorum had three tendons only, inserted into the 2d, 3d, and 4th toes. In place of the 4th was a small distinct muscle arising from the under surface of the tendon of the flexor longus opposite the scaphoid bone. Its tendon was perforated and inserted like the tendons of the flexor brevis. This peculiarity is described in Meckel's Anatomy.

(3.) On removing the integument and fascia from the back of the leg a singular fleshy mass appeared, taking its origin from the lower two inches of the posterior border of the fibula. This proved to be a portion of the accessorius. Its tendon passed over the sheath of the flexor longus pollicis into the arch of the foot, and was there joined by the inner head of the accessorius. The outer head was represented only by an aponeurotic extension.

This variation I do not find described in any anatomy. It was found on both sides.

HOSPITAL NOTES.

MONTREAL GENERAL HOSPITAL.

(Service of Prof. Roddick.)

RAPID LITHOTRITY.

(Reported by Rankin Dawson, B.A.)

J. E., admitted December 25, with symptoms of stone, which have, from his account, lasted some years. Six weeks ago he passed a small, irregular fragment, phosphatic in nature. Muco-pus and triple phosphate

crystals in urine. The sound gave evidence of a large, hard stone. It measured 1½ by 1 inch. On January 12, crushing was performed by Bigelow's method. The lithotrite was introduced seven times, and as many aspirations practised. The stone was composed of oxalate of lime, and the fragments weighed five drachms. For four days after the operation, the urine was bloody and the temperature was over 100° Fahr. On the 20th, a fragment which had been left was crushed and removed in three washings. Patient rapidly improved, and was discharged February 3.

MEDICAL PROGRESS.

ANEURISM OF THE ORBIT.—Dr. J. R. WOLFE reports the following case, occurring in a woman aged twenty-two, the mother of two children, of fair complexion, with blue irides, a large nævus of a claret color on the right temple, and another on the left breast; she received a blow on the left eye in February, 1881, when it became blue and the cheek swollen, but there was no pain. Three months later she began to suffer pain, with severe knocking in the head, which was very violent at intervals. She then consulted me, and I found a general dilatation of the orbital tissues and a slight protrusion of the eyeball. There was no pulsation, but a slight bruit was audible in the orbit. Vision was not affected, and there was only hyperæmia of the retina, without change in the vessels. On account of her expected confinement, she did not return till the 11th of October. The eye then protruded considerably; all the tissues of the orbit were highly vascular; the lids (especially the upper) were infiltrated and dilated. The conjunctiva was injected, and the subconjunctival tissue permeated with coarse, dusky vessels. The eyeball was pressed downwards and outwards, so that adduction beyond the centre was impossible. A tumor half the size of a walnut was seen near the inner canthus. It was soft and pulsating, and effaceable on pressure; when the finger was applied to the inner angle there was a distinct bruit like that of a telegraph wire, and the stethoscope at the orbit conveyed a puffing like that of a steam-engine. The pulsation was visible at some distance, and her husband said that, when he approached her, he heard from the eye a noise like "the clucking of a hen." When the carotid artery of the same side was compressed, the bruit ceased and the tumor was partially effaced.

Vision had become impaired; within the last few days, ulceration of the outer margin of the cornea had commenced, and the pupil was sluggish. As she could not read, or keep her eye open, even for a few seconds, telling the time on a white-dialed watch was the only test for vision I could apply; this she could only do with difficulty.

Wishing to give the antiseptic treatment a trial in this case, I allowed Dr. Foulis, on October 20, to perform the operation. The patient was put under chloroform by my assistant, Mr. Bell, an incision two inches and a half in length was made along the border of the sterno-mastoid muscle, and the artery exposed and tied with catgut ligature under the spray. The ligature was cut short. The only peculiar feature of this case was that a triangular-shaped lymphatic gland of considerable size was found over the vessel, and this had to be lifted to allow the application of the ligature. The edges of the wound were brought together by wires and the antiseptic dressings applied. The spray was also used in the subsequent dressings. Pulsation in the orbit immediately ceased, the tumor was considerably diminished, and the eyeball retracted within the orbit to such an extent that motion in every direction was perfect. The ulceration of the cornea was arrested, and the conjunctival vessels retreated to the cul-de-sac. Vision is now normal (she can see the seconds' pointer on the watch), the ophthalmoscopic appearance shows clear definition of the disc, and the arteries are of nearly normal calibre. The veins are still slightly dilated and tortuous at the periphery. There has been no bad symptom during the whole course of treatment. She slept well, her appetite was good, and the temperature never rose above 100° Fahr.—*Lancet*, Dec. 3, 1881.

NEW METHOD FOR RELIEVING THE PAIN OF LEAD COLIC.—DR. GENEUIL relates a case of lead colic to which he was called in the country, and where none of the various means adopted for the relief of the terrible pains of lead colic, as rubefaction by sinapisms, chloroform, electricity, and hypodermic injections of morphia were at hand, and in which he succeeded in giving complete and permanent relief by a very simple procedure. Having directed a napkin to be heated at the fire, he first applied a towel wetted with almost ice-cold water to the whole surface of the abdomen, while the patient was shrieking with pain, and having retained it there for four or five seconds, rapidly replaced it by the almost burning napkin. The effect was like enchantment, the pain instantly disappeared and sleep followed, without any return of suffering. The cause of the colic was obscure, but Dr. Geneuil advances the remarkable supposition that the patient, who was an inveterate smoker, had very often in the day to relight his pipe, which he did by means of matches colored with chromate of lead.—*Bull. Gén. de Ther.*, Feb. 15, 1882.

REMOVAL OF THE UTERUS IN OVARIOTOMY.—In the *New York Medical Journal and Obstetrical Review*, for March, 1882, Dr. ANDREW F. CURRIER, House Surgeon to the Woman's Hospital, relates a case of removal of the uterus in connection with a multilocular ovarian cystoma, performed by Dr. T. Gaillard Thomas, and remarks that to remove a simple, free ovarian cyst is not a difficult operation, but that such tumors are not to be looked for in the majority of cases. From the record of more than fifty laparotomies performed at the Woman's Hospital, during twelve working months, he finds only nine done for ovarian tumors unattached to surrounding viscera. In several of these, other serious complications were present. The adhesions in the remaining cases were more or less firm, involving the necessary risks of hæmorrhage, septicæmia, and peritonitis. Three out of the entire number held such intimate organic relations to the uterus as to call for the removal of that viscus. In one other case the uterus was removed on account of a growth developed from it. In others the portion of sac attached to the uterus was left. The ovariotomist should be prepared to take the bold step of removing the uterus, when it is called for by such complications.

TREATMENT OF SKIN DISEASES.—At the meeting of the Harvein Society, of London, on February 16th, Dr. THIN read a paper on the "Treatment of Diseases of the Skin," illustrating his views by remarks on the treatment of eczema, which he showed was most successful when conducted in accordance with the ordinary principles by which acute and chronic inflammations of other parts are treated. In acute eczema the principle of rest to the inflamed part is secured by the free application of absorbent powders. By this means the inflamed rete mucosum is protected until the inflammation terminates by resolution. In subacute and chronic eczema the diseased condition is kept up by a new substance which is formed amongst the products of inflammation, and the rational plan of treatment is to destroy this unknown *tertium quid*. When the symptoms are urgent in this stage, good results are obtained by using

the benzoated zinc ointment of Wilson, the diachylon ointment of Hebra, and the starch poultices of Hardy. These methods of treatment protect the inflamed epidermis, and allow the *medicatrix naturæ* to come into play, and resolution may thus still be obtained. But frequently these means fail, and it becomes necessary to apply escharotics to the rete, the purely escharotic effect being modified by dilution. The substances generally used for this purpose are ointments containing the salts or oxides of mercury or potash soap. Their action is twofold—they destroy chemically the diseased epithelial cells amongst which the *materies morbi* presumably exists, and they stimulate by the influence they exert on the subjacent blood-vessels an effusion of the blood plasma, in which the elements of a healthy reparative action are to be found. The treatment of the more inveterate forms of chronic eczema which was most successful, was strictly in accordance with ordinary surgical principles, and consisted in eradicating the morbid product by concentrated solutions of caustic potash. Although the necessary degree of stimulation in chronic eczema might be attained by the use of any one of many irritants, in certain kinds of disease one irritant succeeded better than another. The author instanced the two methods of treating eczema of the scalp, by alcoholic solution of potash soap with douches and by diluted mercurial ointments, and gave the preference to the latter, which in his hands had usually led to a more speedy cure. In certain painful forms of moist eczema, he had found the use of the starch poultices of the French school exceedingly useful. In eczema of the scrotum, when the inflammation was severe, he was in the habit of ordering arrowroot poultices, frequently renewed, with great comfort to the patient.—*Lancet*, March 18, 1882.

Conjunctival Transplantation.—Dr. Marc Dufour terminates an interesting memoir on this subject with the following conclusions:—

1. The human conjunctiva can be replaced by that of animals, by another human conjunctiva, or by another mucous membrane, as for example, that of the mouth.

2. The wound should be made about a quarter of an hour before transplantation, and to be successful there should be no hæmorrhage.

3. It is important that the sutures should be placed in position before the fragment is removed.

4. The tendency of the fragment to shrink is of no practical importance.

5. It is advantageous to bathe the wound and the fragment in a solution of salicylic acid.—*L'Abeille Méd.*, March 13, 1882.

The Physiognomy of Phthisis.—Mr. Francis Galton has recently, in conjunction with Dr. Mahomed, been engaged in applying his method of "composite portraiture" to the investigation of the amount of truth which may underlie the popular belief that a certain type of features indicates a tendency to certain diseases or classes of disease. As yet their attention has been limited to the determination of the reality of a consumptive type, and for this purpose they have photographed a large number of patients, whom they then proceeded to group on clinical data. Cases of advanced disease showed nothing particular beyond well-marked emaciation. Cases grouped according to the rapidity of the course of the disease gave negative results, nor had those in whom the hereditary tendency was strongest anything very definite in common. But on a further examination these last were found to fall into two main divisions, not, however, separated by any well-marked line of demarcation. In the first division the faces were broad, with coarse, blunt, and thickened features; while in the second the faces were thin, narrow, and ovoid, with thin, soft, and narrow features—the two types corresponding with what are commonly known as the strumous and tubercular physiognomies. Comparing, however, phthisical and non-phthisical patients, they found the same proportion of narrow, ovoid faces to exist in each. Thus far their conclusions are opposed to the belief that any single type of face prevails among "consumptive" persons generally, or that persons of any special type are more predisposed to phthisis, although the phthisical members of each class are generally of a more delicate type, with finer features, lighter lower jaws, and narrower faces. Yet the delicate features and ovoid face seem to betray an excessively developed nervous temperament, with a deficiency of bone and muscle and staying power, easily broken down under insanitary conditions or mental strain which their robuster brethren would resist; and if, as many maintain, the so-called strumous diathesis be a modified syphilitic taint, it is not surprising that among such the low inflammatory changes called struma should be frequently observed. The inquiry, or rather the method employed, is new, and is certainly very interesting.—*Med. Times and Gaz.*, March 18, 1882.

Myxœdema Improving under Treatment.—At the meeting of the Clinical Society of London held March 10, 1882, Dr. Mahomed showed a case occurring in a married woman, aged thirty. Her family history was good. She had been married twelve years, and had had seven children, the youngest child eight months old. The symptoms of her disease commenced towards the end of her first pregnancy. She had the usual symptoms of the disease, and her appearance was very characteristic. When first seen, there was great swelling of the lower eyelids, which hung like bags containing fluid; her face was generally swollen, the lips were bluish, the cheeks pink; the hands were hard, swollen, brawny, and stiff—so that her movements were awkward, and her sensation impaired. There was no pitting on pressure of the affected parts, the lower extremities were not affected. Speech was slow and laborious, as usual in this disease. Her chief complaint was pain at the top of the head, worse towards evening and at night. The urine was not albuminous; the impulse of the heart was not perceptible; the pulse small, with the artery apparently contracted, so that at first no satisfactory tracing could be obtained. During the first fortnight, no change in her symptoms was perceptible; after that she was treated by one-fiftieth of a drop of nitro-glycerine, and from this time she rapidly improved. The headache immediately disappeared. In a fortnight the appearance of extreme swelling below the eyes had very greatly diminished; her hands were supple, much softer, her gloves being too large for her; she talked more quickly. The treatment had been assisted during the last week by severe purging. A trace of albumen was found in her urine on two occasions. Her pulse-tracing, when her arteries had been dilated by nitro-glycerine, showed an increase of pressure and prolongation of systole. The improvement in her condition had been frequently remarked upon by her friends and all who had seen her at the hospital. She had now been under treatment about two months, and the skin of her hands was quite loose, and almost natural. Her face, though much improved, was still characteristic of the disease. A photograph taken on February 20 was exhibited. Dr. Mahomed treated her with nitro-glycerine with the intention of relaxing her arteries, thus reducing, to some extent, the arterial pressure, and increasing the rapidity of her capillary circulation. Severe purgatives, which, she said, afforded her great relief, were administered with the same object.—Dr. Cavafy said that these cases

often improved under the most various treatment. In one of his cases the patient, when seen, was unable to take off her wedding-ring, but afterwards this could easily be done. His second case also improved, especially as regarded the hands. A third case, in a gentleman he had seen, had also improved; and in one on whom Charcot had lectured, the Professor regretted that the patient was so much better that he could not show the marks he desired. In one of Charcot's cases, residence in a warm climate, and a modified milk diet, together with sulphur-baths, seemed to do most good. In his own cases he had given one ergot, the other strychnine, and the third was treated by iodide of potassium. But all such cases varied; especially they were worse in cold weather.—*British Medical Journal*, March 25, 1882.

DIABETIC ENDOCARDITIS.—M. LECORCHÉ has observed diabetic endocarditis more often in the female than in the male. It only occurs in an advanced stage of the disease, two or more years after its onset, and is localized at the mitral orifice; it can be recognized by a murmur occurring with the first sound of the heart heard at the apex, and by irregularity and intermittence of the pulse. It is usually accompanied by atheromatous degeneration of the arteries, and precipitates the fatal result either by more or less general œdema or by an induced acute hepatitis. It appears to be due to the irritation produced in the endocardium by prolonged contact with blood altered in character by the presence of an excess of sugar.—*Revue Scientifique*, March 18, 1882.

A MODIFICATION OF THE METHOD FOR TOTAL EXTIRPATION OF THE UTERUS THROUGH THE VAGINA.—Prof. MULLER recommends, on theoretical grounds, the division of the uterus into two symmetrical halves by a vertical incision. Then each half of the uterus, with its ligament, may easily be drawn down separately, and the ligaments may be readily excised and the vessels ligated without risk of hæmorrhage.—*Deutsche Med. Woch.*, March 25, 1882.

SPAYING FOR UTERINE FIBROIDS.—Dr. W. WIEDOW, Assistant in the Gynecological Clinic at Freiburg, has published in the *Centralblatt für Gynäkologie* (Nr. 6, 1882) his experience of the above method of treatment. He prefaces his account with some very just remarks, pointing out the tendency that there is, when a new mode of treatment is introduced and is found beneficial, to reason with undue confidence from the first few successful cases, to regard the new measure as one of universal efficacy, and to apply it accordingly. From indiscriminate application bad results follow, and the treatment becomes discredited. Nevertheless, if all results are fully and fairly published, such indiscriminate, and therefore unsatisfactory, practice becomes of great value in enabling us to determine with precision the cases in which the treatment is of real utility. Dr. Wiedow's cases are twenty-one in number, of which three died (a mortality of fourteen per cent.), all of them from peritonitis. In six, ill results of other kinds followed; twice intra-peritoneal abscess; slight peritonitis in two cases; in one peri-vaginal abscess; and in another thrombosis of the saphena vein. As to menstruation, this function was arrested in eleven cases. In four hæmorrhage recurred at monthly intervals from one to three times after the operation, and then ceased. In one, aged forty-four, the patient menstruated for nine months after the operation, and then ceased to do so. In another, hæmorrhage ceased for the three months following the operation, and then recurred, being accompanied with dilatation of the cervix and pains indicating a tendency to spontaneous extrusion of the tumor; the case was successfully ended by surgical enucleation of the growth. In the remaining case, hæmorrhage was absent for five months and then returned, together with renewed growth and lymphangiectatic degeneration of the tumor. The tumor was punctured and then incised, with a fatal termination. We have then, in short, three deaths and six cases of illness following the operation to put against fifteen cures.—*Med. Times and Gaz.*, March 25, 1882.

APPLICATION OF BLISTERS TO CHILDREN.—Dr. ARCHAMBAULT, in a lecture reported by M. Paul Lucas-Championnière, in the *Jour. de Méd. et de Chir. Practique*, remarks that the utility of blisters for children is often doubtful. Even when it is thought necessary to have recourse to this violent means, their application should be carefully superintended; and, if too prolonged, they may bring on a true burn of the third degree and nervous symptoms, notably convulsions, such as have been noted by Graves and others. For a child a year old, it is sufficient to leave the blister on during one or two hours at most. For a child four or five years old, an application for about four hours is always sufficient. If, when the blistering plaster is removed, no vesicle be formed, it suffices to apply an emollient poultice to produce one speedily. Finally, to prevent the accidents which may supervene with respect to the vesicles, care must be taken, according to Bretonneau's practice, to interpose a layer of oiled silk between the plaster and the skin, both in children and in adults. There are a certain number of contra-indications to the application of blisters. Emaciated children, reduced to a cachectic condition by long-standing suppuration, or predisposed to cutaneous eruption, should not, except under special circumstances, be submitted to blistering. On the one hand, it exhausts their remaining stock of strength; and, on the other, the local irritation set up by the blister may serve as a starting-point for an outbreak of eczema or impetigo. It is especially, however, in diphtheria that the use of blisters should be avoided. M. Archambault says that it cannot be too often repeated, that blisters should never be applied to diphtheritic patients, nor even to those suffering from attacks of which the diphtheritic nature is not absolutely demonstrated. This applies especially to false croup, in which blistering is not of the least utility. In fact, under these circumstances, the blister too frequently ulcerates, and becomes covered with diphtheritic products, which increase the gravity of the disease. Finally, in the eruptive fevers, especially measles, which predispose to gangrenous accidents, the use of blisters is contra-indicated. Blisters applied to the nape of the neck, with the intention of soothing insomnia, delirium, and restlessness, not only do not produce the effect required, but increase the evil. It will also be advisable not to have them applied on parts exposed to friction; they should be applied, by preference, on the anterior and lateral portions of the thorax. The wounds consequent on blisters may become inflamed, and then the denuded surface should be covered with emollient poultices. If there be ulceration, the following lotion may be used advantageously: Decoction of cinchona, 500 grammes; solution of chloride of lime, 200 grammes; The diseased surface is afterwards powdered with quinine powder. The following ointment may also be useful in similar circumstances: Glycerole of starch, 30 grammes; red precipitate, 50 centigrammes. When the blister becomes coated with a grayish pellicle, somewhat of the appearance of hospital gangrene, an excellent plan is to cover the injured surface with a coat of plaster-of-Paris. It should not be forgotten that all these accidents are generally subordinate to a bad general condition, which must, therefore, be improved.—*London Med. Record*, March 15, 1882.

Uricæmia.—Dr. Boucheron has communicated a paper to the Académie des Sciences (*Gaz. Hebd. de Méd. et de Chir.*, September 2, 1881) on the presence of uric acid in the blood, which he asserts to be a very frequent condition, and the cause of a very large number of diseases. For its detection, he recommends the examination of the saliva. One or two grammes of saliva should be dried in a capsule without boiling or so much heat as to turn it yellow, and when it is dry, a rod dipped in nitric acid should be passed lightly over the deposit, and followed immediately by a rod dipped in ammonia. He think this murexide test more delicate and less liable to fallacy than the method of crystallization.—*London Med. Rec.*, March 15, 1882.

Cure of Pneumothorax.—The cases of pneumothorax related at the last meeting of the Clinical Society by Dr. G. Johnson and others are of considerable interest from several points of view, both pathological and clinical. But the most striking fact to be elicited from the discussion is that a lung may completely recover after having been compressed against the spine for several days, and even longer. This is in direct opposition to the view currently taught, that the lung is maintained in its expanded condition by the atmospheric pressure on its inner surface, and that if this be neutralized by the same pressure on its outer surface, the lung at once collapses on account of its great elasticity. But such cases as Dr. Johnson's demonstrate that this view is not correct, and show that a collapsed lung may afterwards completely expand. This makes the prognosis of such cases far more hopeful, and justifies active therapeutic means, such as tapping, for it holds out the prospect of being able to extract all the air from the pleural cavity, and at once allow the expansion of the lung. The most important bearing of these facts, however, is upon the treatment and results of cases of pleuritic effusion. They suggest inquiry as to the reason why a lung does not fully expand after compression by fluid as it does after compression by air. Evidently, the physical results of the pressure are the same in the two cases, and there is the same natural tendency to lung expansion in the one case as in the other. What, then, is the hinderance? The explanation is to be found in the fact that in cases of fluid effusion there is inflammatory thickening of the pulmonary pleura; and if the lung is compressed for any length of time the inflammatory tissue organizes into fibrous bands, binding the lung down to the spine, and preventing the subsequent complete expansion of the lung. If this is correct, physicians have a strong additional inducement to submit cases of pleurisy to surgical treatment quite early, before these adhesions have formed. For it cannot be too strongly insisted upon that the mere absorption or removal of the fluid does not constitute the cure of pleurisy; that is only accomplished when, in addition, the compressed lung has expanded to its former size. There is now clear evidence that such results are theoretically attainable if only active measures be adopted at a sufficiently early period in the disease. At any rate, it is to be hoped and expected that more correct views of the physiology of respiration will quickly be followed by improved results in treatment.—*Lancet*, March 4, 1882.

Pilocarpine in Serous Pleurisy.—M. A. Corivaud draws the following conclusions from the observation of the three cases of serous pleurisy treated by hypodermic injections of pilocarpine.

1. Nitrate of pilocarpine injected under the skin in doses of from 1 centigramme to 25 milligrammes produces no local disturbance, and is more than a mere sialagogue.

2. When employed at the outset of pleurisy, this drug is capable of so modifying the inflammation of the pleura as to prevent the formation of effusion and of false membrane, and to accelerate the absorption of the secretion already formed.

3. It appears to act by the power which it possesses of causing the abstraction of water, and is therefore analogous in its action to purgatives and diuretics.

4. Pilocarpine is to be preferred to the drug from which it is derived.—*Journ. de Méd. de Paris*, March 18, 1882.

The Influence of Posture on the Pulse.—The influence of posture on the frequency of the heart's action, pointed out as long ago as 1732, by Bryan Robertson, has never been satisfactorily explained. It has been ascribed to the difference in the state of the muscles in the upright and recumbent posture, but most authorities are inclined to accept the explanation which has been given by Marey, that the retardation of the pulse in the recumbent posture is the result of a general increase in the blood-pressure, due to the difficulty the heart has in emptying itself in that position. The latest writer on the subject, Schapiro, of St. Petersburg, also comes to the conclusion that the result must be ascribed to an alteration in the pressure within the heart and vessels. He found that the blood-pressure within the radial artery is demonstrably higher in the horizontal than in the vertical position, and then examined the effect on the pulse-frequency of alterations of posture when the femoral artery is compressed just above Poupart's ligament. From his observations he concludes that the difference in the frequency of the pulse in healthy men between the horizonal and vertical posture may amount to from one to thirty beats per minute. In the horizontal posture the pressure within the heart and arteries is two to three millimetres higher than in the upright position. In the recumbent posture compression of the femoral artery, which increases the arterial pressure, lessens the pulse-frequency. In heart disease, so long as the lesion is compensated, posture has the same effect on the pulse as in health. If, however, compensation is imperfect, the horizontal posture does not lessen the frequency of the pulse, and may even increase it. Schapiro thus differs from Graves, who was inclined to regard the absence of the normal effect as an indication of cardiac hypertrophy. In some general diseases, also, as typhus, the pulse-frequency is not lessened either by the horizontal posture or by compression of the femoral artery.—*Lancet*, March 25, 1882.

Mercury and other Remedies in the Treatment of Syphilis.—In the *New York Medical Journal and Obstetrical Review* for March, 1882, Dr. George Henry Fox, Clinical Professor of Diseases of the Skin in the College of Physicians and Surgeons, New York, maintains that mercury, while undoubtedly our most valuable remedy in the medicinal treatment of syphilis, is yet an over-rated drug, and is not essential to the cure of the disease. It is best administered internally rather than by inunction, by vapor baths, or by hypodermic injection. The amount usually given is unnecessarily large, and its local irritant effects should be avoided. The duration of its use should vary according to the severity of the case: no absolute rule can be laid down. Iodide of potassium, the author thinks, should not be reserved solely for the late period of the disease, for their is no stage in which either iodine or mercury is incapable of doing good. Instead of the so-called "mixed treatment," he prefers to give the two agents separately. Iodide of potassium ought not to be administered continuously for any great length of time. It does its work quickly or not at all, and when

unnecessarily continued is sure to do harm. Very large doses should not be used without the very plainest indications. They are not without their value in certain cases, but iodism has doubtless often been mistaken for the manifestations of syphilis. Iron deserves to be ranked with mercury and iodide of potassium, from its effect on the anæmia that invariably accompanies the early stage of syphilis. Cod-liver oil is another remedy of great value, especially where there is a strumous taint.

A NEW TEST FOR MORPHIA.—JORRISON (*Zeitschr. für Analyt. Chem.*, Band xx. p. 422) proposes a new and delicate test for morphia. A solution of the alkaloid, free from foreign materials, is evaporated to dryness, and the residue is heated in the water-bath with sulphuric acid. A minute crystal of ferrous sulphate is added, and stirred with a glass rod. The mixture is heated for a minute longer, and poured into a white capsule, containing about half a fluiddrachm of strong solution of ammonia. The morphia solution sinks to the bottom, and a red color—violet at the margin—forms where the two liquids touch, whilst the ammoniacal liquid becomes blue. Codeia does not give this reaction, which succeeds with one-tenth of a grain of morphia.—*London Med. Record*, March 15, 1882.

PUNCTURE OF THE PERICARDIUM.—At the meeting of the Société Médicale des Hopitaux, held February 24, M. RENDU showed a patient on whom he had performed paracentesis of the pericardium. The patient was a young man, and had been admitted into the Tenon Hospital in a typhoid condition with signs of a dry pericarditis, an effusion afterwards taking place, and increasing day by day. M. Rendu alluded to a diagnostic sign which he had never seen alluded to, and which was very marked in his patient, and led him to diagnose an abundant effusion, that is, the existence of a very pronounced murmur (*bruit skodique*) posteriorly in the infra-spinous fossa, with preservation of the resonance of the lower part of the chest. M. Rendu decided to perform paracentesis. He believed, however, that the point of puncture usually chosen, in the fourth intercostal space about three centimetres to the left of the sternal border, was unfavorable, since one was liable, by inclining inwardly, to puncture the internal mammary artery, or, by inclining outwardly, to wound the heart, which is usually dilated. M. Rendu, therefore, selected a point in the sixth intercostal space, a little below where the apex beat is felt, and eight centimetres from a vertical line passing through the centre of the sternum. Nine hundred and fifty centilitres of effusion were drawn off; the operation was entirely successful, although a little pulmonary congestion accompanied by fever, led him, for a time, to fear some serious complication. Examination three weeks afterwards revealed pericardial friction sounds, showing, therefore, that the secretion had not been reproduced. The beats of the heart were imperceptible, and the pulse weak. One month after the operation the patient had an attack of pleurisy on the left side, from cold, from which he soon recovered.—*Le Progrès Méd.*, March 18, 1882.

RELATIVE POWER OF ANTISEPTICS.—The *Revue Scientifique* for February 4 contains an abstract of experiments made by M. JALAN DE LA CROIX to ascertain the relative value of various substances in preventing the development or evolution of the microbia of putrefaction. He placed finely divided boiled or raw meat in water, and ascertained the maximum and minimum quantities of each substance that were effective. The figures in the following table indicate the number of grammes of water in which one gramme of the substance mentioned prevents the development of microbia:

Substance employed.	Maximum dose in which development is not arrested.	Minimum dose in which development is arrested.
Alcohol,	30	1.77
Chloroform,	134	1
Soda biborate,	107	14
Eucalyptol,	308	14
Phenol,	1002	10
Thymol,	2229	20
Potash permanganate,	3041	35
Picric acid,	3041	100
Borated soda salicylate,	3377	30
Benzoic acid,	4020	50
Ethereal oil of mustard,	5734	40
Sulphurous acid,	7534	72
Alum acetate,	7535	478
Salicylic acid,	7677	343
Mercury bichloride,	8358	2525
Lime hypochlorite,	13092	109
Sulphuric acid,	16782	135
Iodine,	20020	410
Bromine,	20875	493
Chlorine,	34509	431

From which it will be seen that chlorine, the hypochlorites, and perchloride of mercury are very effective, whilst alcohol is comparatively impotent.—*Lancet*, March 4, 1882.

TREATMENT OF SUPPURATING BUBOES.—Dr. O. PETERSON discusses the various methods of treating buboes (*St. Petersb. Med. Woch.*, No. 52, 1881), and describes the plan now adopted by himself. He recommends that every inflamed bubo should be painted with iodoform-collodion and covered with a warm compress; and this, he states, is often successful in dispersing the swelling. If, however, suppuration take place, an incision is made, and the abscess-cavity scraped out with the sharp spoon, after which it is washed out with a twenty per cent. solution of carbolic acid. The wound is then covered with several layers of salicylic wool, and over this a firm pad of tow covered with varnished paper. A bandage is then firmly and evenly applied, paste being also sometimes used to give greater firmness, so that the abscess-walls are kept in close and accurate apposition. In twenty cases treated by the author in this way, cure was usually obtained after one to three dressings, each being left undisturbed ten to fifteen days on an average. In one case, when the pressure had not been quite equable, a second small abscess had to be opened.—*London Med. Record*, March 15, 1882.

NEPHRECTOMY BY ABDOMINAL SECTION.—MR. KNOWSLEY THORNTON removed the right kidney from a young woman at the Samaritan Hospital on March 11th. The case was one of pyonephrosis, and the kidney was incised and drained through the loin for a month before its complete removal was decided upon. The kidney was removed by abdominal section, the incision being made outside the rectus abdominis, as recommended by Langenbuch, of Berlin, in the discussion on Nephrectomy at the Congress. Mr. Thornton found great advantages from this incision, as compared with either the ordinary median incision or the lumbar section. The patient was progressing very satisfactorily four days after the operation, there having been less fever and constitutional disturbance than there often is after an ordinary ovariotomy. The patient from whom Mr. Thornton removed an extra-uterine fœtation by abdominal section at the Samaritan Hospital a fortnight ago is quite convalescent.—*Med. Times and Gaz.*, March 18, 1882.

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THE MOVEMENTS AND ELECTRIC IRRITABILITY OF THE HUMAN HEART.

IN a few rare instances nature has permitted the verification on man of the results derived from experiments on the lower animals. For some time past, in Germany, a case has been the subject of study, which, for the importance of the results obtained, promises to rival the famous Alexis St. Martin. In 1878, Catharina Serafina, a Silesian peasant, forty-two years old, submitted to an operation for the removal of an enchondroma of the chest-wall, in which it was necessary to remove the greater part of the anterior portion of the third, fourth, fifth, and sixth ribs of the left side. In spite of the pneumothorax and collapse of the lung which followed, she nevertheless recovered, and served in 1879 as a subject of study on the motions of the heart for Grützner, and later for Filehne and Penzoldt in their investigations on the mode of production of the apex beat. Their results attracted very little attention from the unsuitableness of the subject for researches as to these points.

In the autumn of 1880, Serafina came under the care of Professor V. Ziemssen, in Munich, who has been since then pursuing a number of important studies on the movements of the heart as well as on its irritability, and that of the phrenic nerve. These results have been recently published, and deserve attention not only from the confirmation they furnish of the results obtained by experiment on frogs and the lower mammals, but also because they open up an entirely new field of therapeutics.

Ziemssen gives two illustrations of the condition of the woman's chest when experimented on: a large hole is seen in the left breast, which is said to be 9 cm. broad, and 11 cm. long, bounded on the edges by the ends of the excised ribs. The opening thus exposed is about the size of a man's fist, and is 9 cm. deep; the skin covers the interior of the cavity and the organs bounding it, viz., the right and left ventricle, left auricle, pulmonary artery, left half of the diaphragm, and the portion of the lung which, though still containing air, and capable, to a slight degree, of carrying on respiration, lies compressed against the vertebral column; the nipple lies at the bottom of this cavity.

Naturally this great disturbance of the normal anatomical relations of the heart, renders observations on the mode of production of the apex beat of little value, though Ziemssen was able to confirm Filehne and Penzoldt's conclusions, that at each systole of the ventricle there occurred a movement of the apex towards the right without any downward motion.

The case was, however, admirably suited for cardiographic studies of the separate phases of contraction of the heart chambers and pulmonary artery. It was found, as would be expected, that the left ventricle contracts with greater force than the right, with a gradual increase of energy towards the apex, while the break in the descending limb of the tracing, due, as was previously pointed out by Landois, to the closure of the semilunar valves, was more marked at the base than towards the apex. Also in the ascending limb of the tracing of the ventricular contraction, breaks are to be seen, which Ziemssen, in accordance with Marey, attributes to the transmitted contraction of the auricle. A remarkable fact disclosed by tracings taken from the left auricular appendage, was that the auricular contraction lasts during the greater part of the systole of the ventricle, attaining its maximum only a little before that of the ventricle, thus being antagonistic to the ordinary views which attribute only *one-third* of the time of the ventricular contraction to that of the auricle, while it is supposed that the latter is completed before the former commences; this may be seen in the tracings obtained by Marey from the auricle of the horse, though it is to be noted that similar tracings obtained by Francois-Franck from the heart of a woman with ectopia cordis, resembled more closely that of Ziemssen, though Francois-Franck also found that the height of auricular contraction coincided with the commencement of ventricular systole.

It was also found that light pressure with the finger on the auriculo-ventricular groove caused a reduplication of the systole of both ventricles and pulmonary artery; with a heavier pressure, a typical delirium cordis was produced, in which all regularity of rhythm is lost, while pressure on the pulmonary

artery caused great irregularity in the contractions of the right ventricle, sometimes retarding, sometimes accelerating it. The effects of increased arterial resistance, obtained by simultaneous compression of both femoral and subclavian arteries, were generally a slowing of the pulse and increase of energy of the contractions, but the results are somewhat invalidated by the pain and general disturbance produced by the necessary manipulations.

The path of the left phrenic nerve was easily traced over the right ventricle, a little in front of the left coronary artery, and when irritated with a weak faradic current, caused a contraction of the diaphragm and a consequent depression of the floor of the cavity, while no pain whatever was felt in the operation, thus overthrowing the hypothesis of Luschka, who attributed the pain in the shoulder in hepatic and peritoneal inflammation to implication of sensitive branches of this nerve, distributed to the pleura, peritoneum, and pericardium. The phrenic was also seen to react, like other motor and mixed nerves, to the galvanic current.

Ziemssen's most valuable results, however, relate to the effects of electric irritation applied to the heart itself. He found that while the induced current was incapable of producing any modification of the heart rhythm when the strongest currents were passed through the auriculo-ventricular ganglia, the body of the ventricle, or the apex (which experiments, by the way, it was found were absolutely painless), the constant current was found to control with the greatest exactness not only the energy and form of contraction, but also the rhythm and frequency of cardiac pulsation, the same laws being applicable in this case as in the instance of other muscles with undisturbed nerve supply. With sufficiently strong currents, each irritation is followed by a complete and perfect systole of both ventricles. It is thus seen that any desired frequency above the normal rate may be produced by using a corresponding rate of interruption, each ventricular systole, even when produced as rapidly as 140 per minute, being strong enough to cause a perfect and strong pulse of the same rate at the radial artery. When, however, the frequency is excessive, the diastolic relaxation and systolic contraction of the ventricle become incomplete, and the breaks in the ascending and descending limbs of the tracing disappear, so confirming in the main the results obtained by Basch on the frog's heart. These rapid interruptions produced no painful sensations.

When, however, a strong, constant current, without interruptions, is passed through two points on the surface of the ventricles, one being on the left ventricle 2 cm. below the left auriculo-ventricular furrow, behind the vertical branch of the coronary artery, the other on the right ventricle in the neighborhood of the phrenic nerve, the rate of pulsation is doubled or trebled, to return again to the normal rate as soon as the current is broken. It is interesting to notice that these localities correspond very closely with the anatomical data as to the seat of the motor cardiac ganglia.

Ziemssen was also able to confirm on the human heart the law formulated by Kronecker and Bowditch from studies of the frog's heart, *i. e.*, "minimal irritations are at the same time maximal irritations," or, in other words, increasing the strength of the current does not increase the strength of the contraction; while he also found, further confirming Basch, that the frequency of the cardiac contractions could be reduced below the normal rate, for instance, to 50 beats in a minute, by slow interruptions of a very strong current; but the rhythm so produced is quite irregular.

Probably the most important results, certainly as regards their practical application, were obtained in the experiments on the effect of galvanic currents passed through the chest-wall, without any direct contact of the electrodes with the heart itself. It was found, both in the case of Serafina and in individuals with normal anatomical relations, that, by placing one pole on the sternum and the other on the vertebral column at the level of the heart, and passing a strong reversing current, it is possible to produce precisely analogous modifications of rhythm and energy of contraction as indicated above. The therapeutic value of such a means of acting directly and positively on the heart is evident, and we will await with interest the results of the studies in this connection with which Prof. Ziemssen is now engaged.

THE LEGAL RESPONSIBILITIES OF THE MEDICAL PROFESSION.

IN a recent number of the *British Medical Journal* there is a discussion as to whether a physician who makes a corporal examination of a female patient, without her express consent first obtained, does not render himself liable to an action for damages for an indecent assault. It would seem that the English law on this point is clear and well settled; and a physician making such an examination, even though acting at the request of an officer of the law, is guilty of an offense which forms the basis of an action. It is not necessary that the person examined should make *bodily* resistance; if there be a mere *verbal* protest, unaccompanied by physical resistance, the physician proceeds at his own risk; and the fact that he was instructed to make the examination by a magistrate, police officer, or the like, forms no defence, since a physician, like any one else, is presumed to be aware of the legal consequences of his actions; and in this case the

English courts have held that the command of an officer of the law cannot make that lawful which is unlawful, although such a command may be pleaded in mitigation of damages.

A careful examination of American authorities, of the report and statute books, and of American works on medical jurisprudence and on criminal law, fails to discover any case bearing on the point. One eminent authority on questions of medical jurisprudence, Dr. Edward Hartshorne, the American editor of Taylor's work on the subject, recently informed us that he had no recollection of having seen the matter discussed, much less had he ever read any American cases on the subject. F. A. Bregy, Esq., who has been for many years Assistant Prosecuting Attorney for this County, never met with a case of this sort throughout his entire experience, nor is he aware that the question has ever arisen in this country.

There is one case, however—that of the People *vs.* McCoy (reported in 45 Howard, New York, p. 216)—which, although not exactly in point, may be thought to have an indirect bearing upon the matter. A woman was arrested, charged with infanticide. Naturally, the first question to be decided was, whether or not she had recently been delivered of a child. The Coroner directed two physicians to make an examination, and report upon the facts. The prisoner strenuously objected; but on being told that force would be used if she did not submit, offered no further resistance; and the physicians gave it as their opinion that the woman had given birth to a child within two weeks previous. On the trial, the Court refused to admit this evidence, on the ground that neither the Coroner nor any other officer of the Commonwealth had any *right* to insist upon such an examination being made; that the proceeding was in violation of the spirit and meaning of the clause of the Constitution which declares that "No person shall be compelled, in any criminal proceeding, to be a witness against himself," and this evidence was excluded, the Court refusing to hear argument upon the subject.

Without entering into a discussion of the correctness of this ruling, which, however, seems to us to be erroneous, enough appears to show the judicial disfavor in which examinations of this sort are held; and the positive character of the English decisions, and the absence of American decisions to the contrary, may suggest to the members of the medical profession their liability in such cases. The English rule appears to us to be based on reason and common sense, and there can be little or no doubt that, if the question were to arise in an American court, the same principle would obtain. Plainly, a physician has no moral right to make an examination where the person to be examined objects. In the case of a private patient, he cannot resort to force or to threats; the most he can do is to point out the consequences which may result from a refusal to submit to an examination, and allow the patient to decide the question, and thus relieve himself of all responsibility in the premises, or withdraw from the case. So, too, when acting under the instructions of an officer of the law, the physician, should he meet with a refusal, may point out the legal presumptions which will arise from such a refusal, but there his power ceases.

Where the ends of justice or the demands of health require an examination in the case of one who is *non compos mentis* or a minor child, the express consent of the natural guardian or guardians, such as parents, brothers, or sisters, or the like, should be first obtained; where such guardians are inaccessible, a case arises where there is need of the most extreme caution.

It is to be hoped that the day is not far distant when a statute will be enacted which shall define as nearly as possible the rights, duties, and liabilities of the members of the medical profession. Cases calling for the exercise of the soundest discretion on the part of physicians are of daily occurrence, and in view of all the circumstances it is remarkable that their actions are not more frequently called into question.

THE MEDICAL PROFESSION AND THE NEW YORK CODE OF MEDICAL ETHICS.

The state of professional opinion on the subject of the new Code of Ethics adopted by a small section of the New York State Medical Society is well exhibited in the excerpts published by us, from week to week. The physicians of the United States are all but unanimous in their opposition to the new doctrine. It becomes more and more evident that the great body of the medical profession in the City and State of New York, not consulted and not recording their opinions, continue, as they have been, opposed to the surrender of professional honor, and that the real leaders are a number of specialists whose interests are promoted by the withdrawal of all restrictions on consultations. In a recent issue of *The Rocky Mountain Medical Times* (April, 1882) we find a letter from a New York correspondent, whose initials are those of a very well-known name in the medical circles of that city, and whose utterances may therefore be regarded as an authoritative exposition of the views of the specialist class. He affirms that "we," of New York, "have long outgrown the old iron-clad code of the American Medical Association, and that if that venerable body of good livers chooses at the next meeting to excommunicate us, we are prepared for the excommunication."

It appears, indeed, that the New York specialists have long refused to be bound by the Code of Ethics. "One evening," says the correspondent above referred to, "a prominent physician, who does a large consulting practice, was discussing this matter of consultation with homœopaths, and in reply to a question whether he would consult with them, replied, 'There are only two classes of men in this city who decline, viz., young men and fools!'" The men who are thus secretly violating their public pledges are doubtless most active in bringing about the *reform* which will enable them to do publicly acts which were before possible only with the greatest secrecy. We are greatly mistaken in the temper of the medical profession if these specialists do not find themselves left to the association and encouragement of the hordes of irregulars whose fees they have so sedulously cultivated.

The developments connected with the birth and promulgation of the new Code render it more than ever certain that the honor of the medical profession, its very existence and organization, indeed, are involved in the maintenance of its cherished principle of non-intercourse with all forms of irregular practice.

THE FIRST ANNUAL REPORT OF THE NATIONAL BOARD OF HEALTH.

THIS somewhat bulky volume of over 450 pages, and two score of maps, plans, diagrams, etc., has just been received. It covers the period of origin and organization of the Board, and its operations during the year 1879. It is "somewhat bulky," as we have said, but it is as full of meat as is the proverbial egg.

The report proper covers only 20 pages, and is chiefly formal and financial. The appendices, which constitute the bulk of the volume, are of course the most detailed and valuable part of the work. We can only name a few of their most important topics to show the value of the book: The Havana Yellow Fever Commission, Diseases of the Domestic Animals, Sanitary Surveys of Memphis and of the Ports and Cities on the Eastern and Southern Seaboard, Hygiene of the Mercantile Marine, various questions of quarantine, and some important investigations into the outbreak of Malignant Diphtheria in Northern Vermont.

It is not only a book valuable in itself, but it points with no uncertain indication to the importance—nay, the necessity—for such a National Board of Health. Had nothing else been done by the Board than its work as to Yellow Fever, it would have been a piece of national economy to establish it. The Board is eminently one of those things which "have a right to be."

THE EFFECT OF AMPUTATION ON THE PROTECTION AFFORDED BY VACCINATION.

A CORRESPONDENT writes us, calling attention to the following statement by Dr. Billings in his article on the late London International Medical Congress in the *International Review*, for January, 1882, page 7:

"It is possible that the immediate location of the body in which a vaccine vesicle has flourished is so changed by the process that it continues thereafter to affect the constitution of the blood in such a way that the poison of small-pox cannot flourish therein, and this hypothesis accords with the fact that in the case of the loss of the limb upon which the vaccine cicatrix occurred *the susceptibility to unmitigated small-pox has been found to return.*"

The number of cases in which vaccinated persons would lose the scar by amputation, and thereafter would be exposed to small-pox, must be quite small. As it is an experiment which but rarely occurs, it is all the more important to collect every instance. We shall be glad, therefore, if any of our readers who have observed such cases, will favor us with sufficiently full notes of them.

It would also be of interest to know in those cases in which amputation has not occurred, but the scar has been lost by its removal by a surgical operation, as, *e. g.*, in the removal of a tumor, or by accident, whether the same loss of immunity from the disease has occurred.

THE GOERSEN CASE.

MOST of our readers will remember the case of Goersen, one of the so-called "doctors" cast out upon the community by Buchanan's "College." He poisoned by arsenic, successively and successfully, first his mother-in-law and then his wife in order that, without either of the aforesaid inconvenient females, he might obtain their estate.

The Court of Oyer and Terminer of Philadelphia, departing from what we believe is the usual legal course, allowed the Commonwealth to show the fact of the antecedent poisoning of the mother-in-law at Goersen's trial for the murder of his wife, on the ground that it was a necessary link in the chain of crime in order that he should obtain the property. This his counsel, in an appeal to the Supreme Court of the State, alleged as a reason for a new trial. To the surprise not only of the community, but also of lawyers, the Supreme Court has reversed the decision of the lower court, and that, too, on a most unexpected point. The admission of the evidence as to the mother-in-law's death was not deemed an error, but the court held that there were certain "general errors," and especially that Judge Biddle's "charge inadequately presented the case in view of the circumstantial character of the evidence and of the

gravity of the crime charged." Had the Judge erred by giving wrong instructions either as to fact or to law, we could understand it, but to reverse the decision because the judge did not say enough as to facts with which the jury were perfectly familiar, apparently opens the door of escape extraordinarily wide. It may be good law. It scarcely seems good sense.

Dr. Barclay, in delivering his retiring address, as President of the Royal Medical and Chirurgical Society, spoke of the "sparkling novelties which glitter in the sunshine of ephemeral notoriety." It is evident that the late president is a conservative gentleman of the old school, who finds little to praise in these degenerate days. It is related of the elder Mott, that one day driving out with one of his sons, the youngster said, "Father, why do you not drive faster?" "Ah," said the old man, "I am driving out, and you, son, are driving in!" It has always been so. In every age were sparkling novelties: many died by the wayside; a few became living truths, known to all men.

SPECIAL ARTICLE.

THE MEDICAL NEWS COMMISSION

ON THE

MANAGEMENT OF VACCINE FARMS AND ON THE PROPAGATION OF BOVINE VIRUS.

(*Continued from p. 414.*)

THE VACCINE FARMS ABOUT BOSTON—(*Continued*).

We next called at the office of the "New England Vaccine Company," Chelsea, Massachusetts, and saw Dr. William C. Cutler, who appeared to be in charge of the establishment, and who absolutely refused us admission to the stables and operating-room, and declined to answer any questions concerning his method of propagating virus. As to the professional status of Dr. Cutler, we learn that he is not a member of the Massachusetts Medical Society.

Dr. Cutler is said to be a very large producer of bovine virus. In one of the daily papers of Boston the statement appears—presumably with his sanction—that he is able to charge from 8,000 to 15,000 points from one heifer. This quantity is three or four times larger than that collected by any other propagator.

Dr. Cutler is the patentee and manufacturer of the so-called "patent solid lymph cones," sold by agents throughout the country. In a circular issued to the medical profession by the "New England Vaccine Company," these cones are described as being "consolidated lymph," and as "solid lymph made into a thick mass," and as being "entirely free from any trace of pus, *débris*, or epidermis." Prof. C. A. Lindsley, M.D., of Yale College, submitted one of these cones for microscopical analysis to Dr. T. Mitchell Prudden, Director of the Physiological and Pathological Laboratory of the College of Physicians and Surgeons of New York, and Lecturer on Normal Histology in the Medical Department of Yale College, and the following is a copy of his report of the examination:

"The mass consists largely of larger and smaller clusters of epithelial cells and cell detritus, together with a large number of hairs, some broken off and others torn out by the roots. Besides these things, there are fragments of vegetable substances of various kinds, fibres, bits of seeds, etc., shreds of connective tissue fibres, starch granules, and considerable colored amorphous material whose nature I am unable to determine. A few lymph cells and fragments of the same are also present.

"Quantitative results were not sought for, but from about half of the single cone I picked out seventy-four fragments of hair which were readily visible to the naked eye, and many more were left which were readily seen by low powers of the microscope."[1]

One of these patented cones was purchased by us from Henry C. Blair's Sons, Philadelphia, agents for the "New England Vaccine Company," and examined with the following results:

We attempted the determination of the morphological constituents only, without reference to its chemical constitution. Following the directions furnished with the "cone," a small heap of filings from the mass was prepared, and the powder stirred in the little glass cup half full of fresh water. A drop of this mixture, placed upon a slide, covered with thin glass, and examined under a power of 220 diameters, showed a large quantity of amorphous masses and granules, with a few isolated epithelial cells and leucocytes.

In order to approximate to the relative proportions of these ingredients, a row of 20 microscopic fields, across the middle of the cover, were inspected, with the result of finding in them: 8 separate epithelial cells, and several masses which seemed to be partly made up of epithelium; 2 starch corpuscles; 1 fungous spore, and 3 leucocytes; also, a mass apparently made up of 200 or 300 leucocytes (these may have been either lymph, pus, or white blood-corpuscles).

Under a power of 50 diameters, which allowed of rapid searching over the whole film of fluid beneath the cover glass, 5 fragments of cotton, 1 of flax, and 1 of blue wool (perhaps from a coat or undershirt), were detected. No cow's hair existed in the drop of fluid examined on this slide; but, in a subsequent drop, three minute fragments, such as are produced in close shaving, were found.

After tinting with aniline, another drop, examined under a high power ($\frac{1}{25}$th immersion, magnifying 1250 diameters), showed very satisfactorily that the "amorphous material" was chiefly made up of leucocytes and epithelium.

For the purpose of comparison, a small quantity of powder, filed off with a new file, from one of the vaccine crusts from another producer (and considered by him worthless) was next mingled with three drops of water and examined under the high

[1] Transactions State Board of Health, Connecticut, 1881.

power. Its solution was effected with much greater difficulty than that of the "cone" filings, but the resulting fluid contained the same amorphous masses of epithelium and leucocytes, except that the latter were in larger proportion.

Hence it appears that microscopic examination of this particular "cone" shows the presence of both pus (or lymph) corpuscles, and epithelial cells; and although these cellular elements would almost certainly occur in fresh lymph, yet candor compels us to admit that we think they would be far less numerous in the pure fluid of the vaccine vesicle.

Besides this, the physical properties of the "cone," such as its cohesiveness, and the ready solubility of part of its substance in cold water, indicate that it is mixed with some foreign matter, such as gum, gelatine, or sugar, and is not, therefore, the unadulterated vaccine lymph which it is alleged to be.

Although the above analysis does not, perhaps, show quite so large a proportion of extraneous material in the composition of the "cone" as that made by Dr. Prudden, yet the fact is amply demonstrated that these "patented cones" are not, as stated by the patentee, purely "*consolidated lymph*," and "*entirely free from any trace of pus, débris, or epidermis.*" In comparing the cone with the above-mentioned worthless bovine crust, we found their properties to be substantially the same; the only difference being that the crust was less soluble, and contained, perhaps, a little larger proportion of cellular elements. A writer, commenting on the analysis made by Dr. Prudden, remarks: "Of course, the true process of making these cones is a matter of secrecy with the manufacturer, but the statement of a former employé where they are made, that the vaccine crust, covered with stable débris, is powdered in a mortar, sifted, mixed with an adhesive fluid, and moulded into shape, is substantiated by the analysis."

It was thought desirable not to confine our examinations of the "cones" to a single specimen. Consequently a second cone was procured, and a portion of the dried material was macerated in a mixture of glycerine and water, placed under the microscope, and found to contain: (1.) Numerous small, irregularly round, and oval cells, faintly granular, and resembling lymphoid cells. (2.) Squamous epithelial cells. (3.) Small columnar cells. (4.) Fragments of hair. (5.) Crystals resembling octahedra of oxalate of lime. (6.) Foreign matter of indeterminable nature.

The lymphoid cells were the most numerous, and the remaining constituents were in such quantity as might be expected from the source whence the material is supposed to come.

Animal lymph which had been collected in capillary tubes, and which was believed to be as pure as it is possible to obtain it, was next examined by the microscope, and found free from morphological constituents, except an occasional lymphoid cell and blood corpuscle.

If such, then, is the composition of the "patented cones," we may expect under favorable circumstances decomposition to occur, and it is therefore not surprising that we frequently hear of horribly sore arms following their use. We recently saw a letter stating that these "cones" had been the cause of a good deal of irritation in some of the Western States, producing, in numerous instances, sloughs and very sore arms. Dr. T. S. Hopkins, of Thomasville, Ga., in a communication to the National Board of Health, tells of very painful results following the use of so-called "patent solid lymph cones." He says:

"Our town authorities have employed a physician to vaccinate all persons presenting themselves for the purpose. The 'virus' was furnished by the town, and procured from the New England Vaccine Company, Chelsea, Mass., as 'bovine matter.' The result has been fearful. Nearly every one vaccinated has suffered severely from erythema or erysipelas, the arm swollen from shoulder to wrist, and the point of puncture presenting the appearance of a sloughing ulcer, discharging freely sanious pus. Many of the cases have been confined to bed, with high fever, from five to ten days, requiring the constant application of poultices to the arm, and the free use of morphia for the relief of pain. It is rumored that the National Board of Health intends to distribute vaccine matter through the country. I deem it my duty to inform you of the result here from the matter used, and *from whence* it came. It came in 'cones' said to contain (each cone) enough to vaccinate 100 persons, at a cost of one dollar per cone. It 'takes' in all cases regardless of previous vaccination, as shown by well-pitted mark, and the inflammation begins frequently on the second day. Those who have tried it tell me they would much prefer to have small-pox" (*National Board of Health Bulletin*, March 4, 1882).

Such serious accidents tend to bring animal vaccination into undeserved discredit. For the sake therefore of the cause of animal vaccination, and for the better protection of the public against small-pox, we would strongly urge that all vaccination compounds, "powders," and "pomades," and even the bovine crust itself, should be avoided, and nothing but pure and unadulterated vaccine lymph be used.

Messrs. Codman and Shurtleff, manufacturers of surgical and dental instruments, are also engaged in the business of propagating bovine virus. Through the courtesy of the firm, we obtained permission to visit their stables, which are located at Stoughton, a small town a few miles distant from Boston. Dr. D. C. Rose, the superintendent, is a practising physician in the town, and consequently is able to give only a small portion of his time to the superintendence of the business. The stables and operating-room were not remarkable for cleanliness. The producers claimed to be propagating the Beaugency "stock" of virus, which they said was imported by them in 1871 or 1872. Dr. Rose informed us that they had lost their succession with their former supply and that they had more recently received importations from France of the same "stock" of virus. The doctor spoke very approvingly of retro-vaccination, *i.e.*, humanized lymph passed again through the heifer, saying he had had better results in the human subject from animal virus produced in that way than from strictly humanized virus.

This firm is using animals from six months to three years old. The inoculations are made on the belly of the heifer, immediately in front of the udder. Lymph sufficient to charge 700 to 800 points is considered a fair yield, though as many as 3,000 points are sometimes taken from one heifer. The lymph is collected from the seventh to the ninth day of the vesicle, and usually on ivory points. Codman and Shurtleff also make what they call "capsules." These consist of two small pieces of glass, one of which is thicker than the other and contains a cup-shaped excavation on one side; this is filled with a paste, made by rubbing down with glycerine the first crust that forms, and which is removed prior to the dipping of the ivory points. Surely such a compound must frequently prove inert, and is scarcely less objectionable than the patented cones already referred to. Crusts, also, and sometimes capillary tubes, are supplied to the trade.

Dr. S. H. Durgan, whose name appears in the *National Board of Health Bulletin* in the list of persons engaged in the business of bovine-lymph culture, is in fact not a producer. He is President of the Board of Health of Boston. The bovine virus used by the Board for gratuitous vaccination is obtained indirectly from the "New England Vaccine Company." Only ivory points are used; "cones," never.

(To be continued.)

REVIEWS.

Epilepsy and other Chronic Convulsive Diseases: Their Causes, Symptoms, and Treatment. By W. R. Gowers, M.D., F.R.C.P., etc. pp. 309. London: J. & A. Churchill, 1881.

Some years have now elapsed since a special treatise on epilepsy has appeared. The works, valuable in their day, of Sieveking, Russell Reynolds, and Echeverria, have become more or less antiquated. A new treatise is needed, and fortunately a competent man has supplied it. Dr. Gowers has superior ability, and has had valuable training under Hughlings Jackson, Reynolds, and others, and special opportunities which he has utilized. The work is largely a record of personal observations.

Dr. Gowers does not regard loss of consciousness as essential; it is unvariable in all severe epileptic fits, but in minor seizures, "in rare cases, some consciousness may be retained." He gives an excellent description of the two forms of the disease—*epilepsia gravior*, *epilepsia mitior*, and narrates a number of striking examples of the automatic actions succeeding to attacks. Under the term "Hysteroid or Co-ordinated Convulsions," he described cases called by Charcot Hystero-Epilepsy. Dr. Gowers objects to the use of Charcot's term, which he regards as misleading. He also finds that Charcot's crucial test, compression of the ovaries, is rarely ever successful in England.

We turned with interest to the chapter on pathology to find the position of our author. He does not confirm the observation of Voisin in regard to the yellow pigmentation of the nerve-cells of the medulla oblongata, and thinks it doubtful whether Meynert's induration of the cornu ammonis is of greater value. In all his cases of epilepsy examined, the cornu ammonis was healthy, and in the two instances of disease of this part found by him there was no epilepsy. The epileptic seizure consists in a sudden, explosive discharge of the energy stored up in the cells of the gray matter, according to Dr. Hughlings Jackson, and this is the theory adopted by Dr. Gowers.

The chapters on diagnosis, prognosis, and treatment are excellent. He places the bromides at the head of the list of remedies, and he gives excellent rules for their administration. He finds borax very useful, apparently next to bromides, and the zinc salts come third in order of beneficial effect. He finds picrotoxine useless. He has but little to say of trephining, and is certainly unaware of the results which have been thus obtained.

The mechanical execution of the book is good, as we always expect in the publications of the Messrs. Churchill.

SOCIETY PROCEEDINGS.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

Proceedings of the Eighty-fourth Annual Convention.

Held in Hopkins Hall, of the Johns Hopkins University, Baltimore, April 11–15, 1882.

(Specially reported for The Medical News.)

First Day.—The meeting was called to order at 12 o'clock by the President, Prof. Frank Donaldson, M.D. The first business of importance was

THE PRESIDENT'S ADDRESS.

The President began by extending a cordial welcome to the delegates of the convention, at the same time expressing his regret at the want of interest in these meetings hitherto shown by members in the counties. He hoped that the increased amount of work and activity manifested of late by the Faculty would so stimulate them to take their proper part in the proceedings that the Faculty might become in reality a State Medical Society. He suggested the appointment of a committee to assist in the organization of county associations, and to urge upon members of the profession throughout the State to attend and take part in our convention. Reference was made to the deaths of distinguished members during the past year, Dr. S. P. Smith, of Cumberland, formerly President of the Faculty; Prof. E. Lloyd Howard, and Dr. J. D. Thomson, being mentioned by name.

In speaking of the work of the last convention, the President dwelt specially upon the importance of biological research, and suggested that it would be well for the Faculty to appoint an additional standing committee on the recent advances in this branch of science, and to offer prizes for the encouragement of original investigations in experimental physiology and experimental therapeutics.

The late changes adopted by the New York State Medical Association in their Code of Ethics, according to which consultations are allowed between its members and all "legally qualified" practitioners, was considered almost inexplicable, and was strongly condemned as being at direct variance with the Code of Ethics of the American Medical Association. "The outside public, who persist in seeing no difference in what they call the several schools of medicine, consider it as inaugurating a very liberal policy; but to the medical community it appears irreconcilable with common sense and honesty. No intelligent consultation is possible between a scientific practitioner and the professed believer in the potency of infinitesimal nihilitics, or with Thomsonians or eclectics, or with men who profess to have discovered the elixir of life or panaceas for all diseases, all of whom in our State

are 'legally qualified' practitioners." The President suggested that the convention "reaffirm our adhesion to the Code of Ethics of the American Medical Association."

Passing to the subject of the International Medical Congress in London, the President considered that it showed the drift of the medical thought of the day that the chief applause there was given not to any great practical physician or surgeon who had discovered some specific or a new operation, but to M. Pasteur, whose work belongs altogether to the domain of preventive medicine. He desired to call especial attention to the very suggestive papers on the germ theory of this veteran investigator as being of great interest and certain to prove of great practical value in connection with the so-called zymotic diseases. All discoveries in science must prove, sooner or later, of substantial use, and they are short-sighted utilitarians who draw invidious distinctions between scientific studies and what they call practical observations. The discovery of Cagniard de la Tour that yeast is a plant belonging to one of the lowest types of fungi became the starting-point for Pasteur's investigations, and suggested that putrefaction and other kinds of decompositions may be really due to a new arrangement of elements brought about by the development of germinal particles deposited by the atmosphere.

The attention of the Faculty was then called to a paper that had been presented to it in 1878 by the speaker, on Spontaneous Generation, based upon the researches of Tyndall, Burdon-Sanderson, Kock, Wyman, and others. In this paper he had shown that life never appears independently of antecedent life, even in the lowest possible form of animal or vegetable; no organic fluid can undergo spontaneous fermentation or decomposition, even in the presence of atmospheric air; any such action originates and is maintained by the developmental action of definite germs. Pasteur, with Tyndall, further established the fact that different kinds of fermentation are produced by organic germs of different species. Many different kinds of germs, especially the bacteria, are habitually floating in the air, so as to be almost certainly self-sown in any organic fluid freely exposed to it. It has been further established that the most readily decomposable organic fluid may be freely subjected to air from which the germs have been eliminated (or deprived of their vitality) without undergoing change. When dried, these germs maintain their germinal power for indefinite periods, starting into renewed life and activity when the requisite conditions are present. Antiseptic surgery is one of the first fruits of the practical application of these principles to medicine. They enforce, also, the great value of cleanliness and purity of the air for the sick.

The different steps taken by M. Pasteur in the progress of his investigations on the minute vegetable organism which causes splenic fever in animals, and malignant pustule in man (baccillus anthracis), were then graphically traced. The statement of Dr. Granitz was quoted that some even of our domestic microphites may be changed by artificial culture into disease germs of deadly infection. Benign, harmless micrococci are rendered virulent and destructive of life by mal-sanitary influences, as foul air, excessive heat, filth, darkness, etc.

Pasteur has further discovered that by artificial culture he can so reduce the virulence of the bacillus anthracis that a very mild form of splenic fever will be induced by inoculation with it, and claims that animals who have thus been "vaccinated" with the virus are protected against the severer form. Prof. Greenfield and M. Toussaint have, from their experiments, arrived at the same conclusion. Pasteur experimented on a flock of fifty sheep, half of which, by previous "vaccination," had gone through a very mild attack of splenic fever. He inoculated the whole flock with the strongest virus, with the prediction that the "unprotected" half would speedily die, and the other half escape unhurt, which prediction was fully verified. Reference was then made to further experiments on Pasteur's lines, that are being conducted by Drs. Klebs and Thomasi Crudeli, in respect to marsh-malaria and also to tubercle. The President thought that, while it is still too soon to arrive at confident conclusions, there is ground for great hopes that much will be accomplished in the prophylaxis of zymotic diseases in the line of Pasteur's methods. Jenner's discovery led the way long since to such a brilliant result.

Proceeding to the subject of vaccinia, he showed how this virus, after successively passing through the human body a number of times, lost to a considerable extent its potency, and that in this way the anti-vaccinators had been given a handle to work on. Happily the virus loses none of its power in transmission through heifers, and when taken from the heifer direct, the true Jennerian vesicle, as claimed by Dr. Martin, is produced. The experience with this virus in this community during the late visitation of small-pox has been most satisfactory. The spread of the disease was most effectually checked. Although Dr. Martin offered a considerable reward in all the principal cities in the Union for information as to the occurrence of any case of small-pox within ten years after thorough vaccination with his heifer lymph, he informs us that it has never been claimed.

The President concluded by thanking the Faculty for the honor conferred upon him in electing him to that office, and asking for their kind indulgence to him while presiding. The

CORRESPONDING SECRETARY,

Dr. J. E. MICHAEL, read letters from Prof. William Goodell, M. D., of Philadelphia, and Prof. J. W. Mallet, of the University of Virginia, accepting their election as honorary members of the Faculty.

The presence on the platform of George E. Ranny, M.D., Secretary of the State Medical Association of Michigan, was announced.

Dr. I. E. ATKINSON, Chairman of the

LIBRARY COMMITTEE,

read a report, showing great increase in the efficiency of the library in the past year, especially in the direction of periodicals, one hundred and eighteen of which, including twenty-five foreign ones, are now taken. It was also stated that a number of foreign societies, to whom copies of our transactions last year had been sent, had responded by sending us their published transactions in return. Many articles of antiquarian interest have been presented to the library, and three hundred and twenty volumes have been added, chiefly by donation. The necessity of an increased appropriation for the use of the library was very strongly urged.

Dr. W. F. A. KEMP, Chairman of the

COMMITTEE ON MEMOIRS,

read short obituary notices of the members deceased during the year, which were supplemented by an eloquent tribute to the memory of Prof. E. Lloyd Howard, by his friend and colleague, Dr. T. S. Latimer, and also one from Dr. Christopher Johnson, Jr., on Dr. S. P. Smith, of Cumberland.

REPORT OF THE SECTION ON SURGERY.

Dr. L. MCLANE TIFFANY stated that in consequence of the resignation of the former chairman, and his own very recent appointment, he had no regular report to

present. He showed a case of a man aged twenty, on whom he had successfully performed amputation at the hip-joint, in November last. The disease was small-celled sarcoma, cause unknown; of eighteen months' duration, It formed a fusiform, semi-fluctuating, and painful tumor, eight inches long and about the same across, attached to the left femur. In order to test the diagnosis, the man was put upon antisyphilitic treatment; soon after, as he was walking in the ward, the bone gave way, revealing the true nature of the disease, and amputation was performed at the hip-joint. The operation was performed by transfixion and lateral flaps. At six weeks a small abscess formed at the upper end of the incision. There is still some discharge, and the patient refuses to have the opening healed; otherwise there is a well-formed cicatrix. This is the second successful case of this operation in Baltimore, in civil practice.

Dr. Tiffany then presented a paper on

THE TREATMENT OF CANCER IN THE RECTUM.

This is one of the most insidious and painful of all diseases. To make a diagnosis of it has been, moreover, almost equivalent to making a prognosis of a slow and continually aggravated disease, and a certain death in the not distant future. Now, however, we are in a condition to do more for it than simply to allay pain, we may greatly help the case, and, in some instances, even cure it. The disease is generally epithelioma; as the mucous membrane here consists of columnar epithelium, so the malignant epithelial formation shows cells of the same kind. Exceptionally only does the neoplasm resemble its analogue—cancer of the lip—and then it will be found to commence at the junction of the skin and mucous membrane upon the verge of the anus, where squamous cells exist. Like epithelioma of the lip, it advances more slowly than the other carcinomata, and involves the surrounding structures more slowly; it is general within the anus, removed from sight, and makes its existence first known by constant irritation, itching, muco-purulent discharge, then purulent, with or without blood, straining at stool, the diarrhœa alternating with constipation, with intense pain on defecation, and finally a slow death. It is sometimes painless in old age. As the rectum itself is insensible to pain, the disease does not at first attract much notice, and is generally supposed to be piles. It is too much a custom among physicians to accept the statement of the patient as sufficient evidence of the existence of piles, and to take no pains to verify the diagnosis. This is a very unfortunate fact, for the great mortality in cases of rectal cancer is undoubtedly owing to the fact that its existence is not ascertained sufficiently early. It is now only recognized when the symptoms are sufficient to call decided attention to it. Cases recorded of nascent cancer in this region are rare. But if epithelioma of the lip be curable, why not epithelioma of the rectum, which resembles it in so many particulars? There must be prodromata. Did the rectum receive a tithe of the special attention given to the vagina and uterus, the disease might become far less formidable.

When discovered, how is it to be treated? Cured, if possible; if not, palliated. Excision of the rectum is one of those operations which, having succeeded at first, was used in unsuitable cases afterwards with unfortunate results, and then fell into oblivion, to be revived again and put in the proper place in surgery. It is an undoubtedly good operation if carried out under proper restrictions, and done in suitable cases. A cancerous growth to be thus treated must be small, freely movable upon the subjacent parts, and should not be accompanied by secondary growths in the groin, iliac fossa, liver, or elsewhere. What is meant by "small" is this, that it be not so large as to require more than three inches of the gut posteriorly, or two inches anteriorly, to be excised. The excision of more than this amount would be contra-indicated, because it would involve the peritoneum. As cancers are, of course, surrounded by small-celled infiltration, which is already impressed by the morbid growth, the finger should be able to detect healthy tissue beyond the growth, but yet below this level, if the operation is to be performed. Further, the cancer must be entirely rectal, and not project into the rectum from the surrounding tissue.

Dr. Tiffany recommends in performing this operation to make two semilunar incisions, so as to enclose the anus, the distance from the verge depending upon the situation of the cancer. These cuts are deepened and the rectum gradually drawn down. The finger may be used to free the rectum from its connections if required, or the cautery, and a central deep cut backwards to the coccyx will give more room, while it affords freer discharge for subsequent drainage. The gut being drawn down as much as desired, it is stitched to the skin, and divided as far as possible above the growth within the limit of safety, or it may be divided and stitched to the skin. The rectal wall being very vascular, it is well to cut it with Paquelin's cautery. If as much as three inches of the rectum be cut away posteriorly, it is not easy to unite the bowel at this point to the skin. Good results follow, however, even if a large gap intervene. Hæmorrhage is free, but controlled by ligature and hot water applied by Davidson's syringe. After-treatment consists in strict cleanliness, irrigation, etc. If wounds should have been made on an adjoining viscus, they must be treated on general surgical principles. Pelvic cellulitis or septicæmia, the most frequent causes of death after this operation, are best prevented by frequent irrigations. Should the perineum have been opened, it should be sutured. The operation being on the rectum, it is difficult to see how Listerism could be applied. But carbolized water is good. Kelsey's analysis of 140 excisions (*N. Y. Med. Journal*, December, 1880, p. 608), shows that the operation causes at least great respite, and sometimes a cure. Deducting the cases fatal from the operation itself (22) and those who passed from observation, there remained 100. Of these, 31 were doing well a year after the operation; 6 were quite well ten years after. As the average duration of the disease is but two years, the operation certainly should be undertaken in suitable cases. Incontinence of feces follows in only obout one-fifth of the cases.

Dr. Tiffany then related a case of a female, unmarried, æt. 47, who had had three years previously a tumor removed from over the sacrum; had had discomfort about the anus for about a year. Three months since she had learned that she was suffering from rectal cancer. Dr. Tiffany found a saddle-shaped growth, its seat resting against the sacrum. It affected almost the entire circumference of the rectum, but did not quite meet in front. It was freely movable, there were no glandular enlargements, general health good. It extended nearly three inches behind and one and a half inches in front. The operation was undertaken February 27, 1882, and proceeded with as above described. It was found impossible to unite the posterior portion of the rectum, after the excision, to the skin. Temperature on third day touched 103° Fahr., sixth day was normal. She leaves this week for her home. The feces are well retained, except when fluid.

If the operation be impossible, it is of the first importance to relieve the symptoms. The pain caused by defecation is so great that the patient defers going to stool as much as possible. The passage of hard, impacted feces causes absolute agony. So, even while opiates are exhibited, soft evacuations every day should be secured. As long as the rectum is fully open injections do good, but after the calibre becomes small they

cease their good effect. Still, they are sometimes necessary to clear away hardened masses of fecal matter. Bougies cause irritation and great pain and are useless. Iodoform suppositories give relief, but should not be continuously used. Opium is our chief agent. Linear rectotomy, division of sphincter and rectum back to coccyx and sacrum, has been found by Dr. Tiffany to give great relief. As the rectum becomes occluded, it becomes a question—shall colotomy be performed. It can of course only relieve the pain of the patient, and prolong life somewhat. But the inconvenience of the artificial anus is more than counterbalanced by the ease given to the patient. Dr. Tiffany has performed this operation three times. In two cases the patients afterwards have succumbed to the disease. Two of these were reported in the *American Journal of Medical Sciences*, October, 1877. The third was performed a month since with success.

DR. GEORGE H. BOYLAND read as a supplement to the Report on Surgery a paper entitled, *Contributions to the Study of the Fractures of the Inferior Extremity of the Radius.*

The meeting then adjourned.

APRIL 12TH.—SECOND DAY.

After some routine business, Mr. William H. Howell A.B., of the Johns Hopkins University Laboratory read

A REPORT OF SOME OBSERVATIONS UPON THE FORM OF THE PULSE WAVE AND THE MEAN ARTERIAL PRESSURE IN A DOG WITH PATENT DUCTUS ARTERIOSUS, BY WILLIAM H. HOWELL, A.B., AND F. DONALDSON, JR., A.B.

In the course of experiments upon the isolated mammalian heart, a dog came under the notice of these gentlemen, evidently suffering from some form of heart disease. Tracings were taken of the arterial pressure and the form of the pulse wave. Afterwards at the post mortem a patent ductus arteriosus was found, establishing a very wide communication between the aorta and the pulmonary artery. There was also apparently some insufficiency of the mitral and pulmonary valves. The aorta from its origin to the bend was considerably dilated, though there was no evidence of any atheromatous changes. Weight of heart 97 grammes, showing general enlargement when compared with hearts of other dogs of similar weight (15 to 18 pounds), which would be about 66.5 grammes. There was some hypertrophy of the walls of left ventricle.

At the opening of the ductus arteriosus into the aorta there was a small valvular fold, not nearly large enough to close the mouth of the ductus, but so placed as to direct the stream of arterial blood sent out from the left ventricle at each systole along the aorta and prevent it from passing into the pulmonary artery, acting apparently something in the same way as the Eustachian valve in the fœtal heart. After the completion of the systole, however, when the elastic recoil of the aorta had set in, this fold could not have had any influence in preventing the passage of arterial blood back into the pulmonary artery, indeed would rather have directed any back current in that direction. The only recorded case of this form of disease found was the one reported by Dr. Hilton Fagge in *Guy's Hospital Reports*, 1873. The rate of the pulse was found to be 140 per minute. The impulse was much increased, and the apex of the heart extended much further to the left of the sternum than normal, showing marked hypertrophy over the whole cardiac region. There was a loud rasping systolic murmur with maximum intensity over the base, also a slight murmur with the second sound.

The tracings were taken from the femoral artery by means of a Marey's sphygmograph. The most favorable obtained, when the animal was perfectly quiet, were found, upon comparison with the sphygmograms taken from the same artery of a healthy dog, to be entirely normal. The femoral arteries were then laid bare and a canula introduced into each of them, one of the canulas was connected with an ordinary mercury manometer which served to register arterial pressure, the other was connected with a Fick's federmographion. The pens of these manometers wrote upon the roll of paper of the kymograph in the same vertical line; a chronograph pen marking seconds, and a Marey tambour for registering respiration, were also made to write upon the same roll of paper.

No anæsthetic was used at first; afterward chloroform was given. It was noticed that when the animal was deeply under chloroform the heart lost entirely an arhythm which was very noticeable when the dog first came under observation, indicating that it had been caused by psychic influences. Nothing abnormal was found. Arterial pressure was good, ranging from 140 mm. to 150 mm. of mercury, *i.e.*, within the limit of normal blood pressure of a dog. Pulse rate 156 to 180 per minute. The form of pulse wave given by the Fick manometer showed a sudden rise of pressure at the beginning of the wave, corresponding to the sudden ejection of blood from the left ventricle into the aorta at each systole, and then a much more gradual fall of pressure as the excess of blood in the arterial system was gradually forced through the capillaries into the veins, resembling the sphygmographic tracing. The wave was markedly dicrotic, but according to Fick this is the normal characteristic of every true tracing of the pulse wave in the dog.

It is especially worthy of notice that the animal kept up such an excellent arterial pressure. *A priori*, it would have been expected from the free communication between the vessels in the lungs and the systemic circulation that there would be a marked and permanent lowering of the general blood-pressure. That this did not occur, must be explained by a compensatory increase in the force of the heart-beat, or by increased peripheral resistance.

The pressure in the pulmonary arteries must have been from three to four times greater than normal, requiring an increased beat of the right ventricle to overcome the extra resistance, and causing a greater amount of blood to flow through the lungs into the left side of the heart. It does not seem probable that there was any serious escape of venous blood into the systemic circulation.

MR. FRANK DONALDSON, A. B., of the Johns Hopkins University Laboratory, then read a paper entitled,

THE INFLUENCE OF INCREASE OF VENOUS AND OF ARTERIAL PRESSURE UPON THE CARDIO-INHIBITORY ACTION OF THE PNEUMOGASTRIC NERVE. BY DR. HENRY SEWELL, ASSOCIATE IN BIOLOGY, JOHNS HOPKINS UNIVERSITY, AND FRANK DONALDSON, JR., A.B.

The following fact was brought out in the course of the researches of these gentlemen, viz., that increase of intra-cardiac pressure weakened or annihilated the cardio-inhibitory power of the vagus. If, for instance, by using a certain strength of stimulation of the vagus, with normal intra-cardiac pressure the heart-beat be slowed one-half, by an increase of the intra-cardiac pressure, the same strength of stimulus causes a slowing of only one-third in the rate of beat, or may, indeed, completely subvert the cardio-inhibitory function of the vagus, which, however, again becomes apparent after lowering the pressure.

Increased pressure within the heart, during the systole of the ventricle, is caused if we clamp the aorta or constrict its bore. Increased intra-cardiac diastolic pressure of the whole heart is brought about whenever the blood flows into the venous side of the heart under

higher pressure. The intra-cardiac diastolic pressure of the ventricle alone is increased by insufficiency of the semilunar valves. It is highly probable that like conditions should have unlike effects upon the activity of the heart, according as they are applied during systole or diastole.

The animals chiefly employed were the frog and the terrapin. In these creatures the heart consists of four separate chambers, viz., a single thick-walled ventricle, two auricles, and a venous sinus, formed by the confluence of the great cardiac veins, which receives the venous blood and communicates with the right auricle. The left auricle has no connection with the sinus, and receives blood from the pulmonary vein. The animal being beheaded and pithed, one canula inserted into the inferior cava, and all other vessels connected with the heart being tied, a mixture of one volume of whipped calf's blood to two of 75 per cent. of salt solution was used to nourish the heart. The blood flowed from a Mariotte's bottle into the venous canula under a constant pressure, which could be varied at will by raisiag or lowering the flask. The arterial canula was connected with a T tube, one limb of which communicated with a manometer; the other limb was connected with an open rubber tube, through which the blood passed out of the heart. Arterial pressure could be varied by raising or lowering this tube. Both vagi were so prepared that either could be put upon the stimulating electrodes.

I. *Effect of Variation of Venous Pressure, Arterial Pressure Remaining Constant.*—In confirmation of the result obtained by a previous observer, it was found that a slight increase of the pressure by which the heart was filled from the flask diminished the inhibitory power of the vagus, when the the strength of the stimulating current and the arterial pressure remained constant. That is, variations of venous pressure within what are, probably, physiological limits, affect the effectiveness of the cardio-inhibitory fibres of the vagus.

Venous Pressure.	No. Beats in *10 Seconds, without* Vagus Stimulation.	No. Beats in *10 Seconds, with* Vagus Stimulation.
2 cm.	5.4	3
5 cm.	5	4
8 cm.	5	5
2 cm.	5	3

II. *Effect of Variation of Arterial Resistance, Venous Pressure Remaining Constant.*—Variations of arterial pressure (that is, intra-ventricular pressure at the time of ventricular systole) has no effect on the vagus action.

II. *Effect of Variation of the Diastolic Ventricular Pressure.*—The arterial canula was pushed past the semilunar valves, until its end lay within the cavity of the ventricle. Increase of arterial resistance in this manner had no effect upon the vagus until blood had made its way backward through the auriculo-ventricular valves into the auricles, thus raising the pressure within them. This indicates, 1. That insufficiency of the semilunar valves, while greatly increasing diastolic intra-ventricular pressure, has no influence on vagus inhibition. 2. Although with this the resistance to the systole of the auricles is augmented, there is evidence that the peculiar effect on vagus action of increase of intra-cardiac pressure can only exert itself during diastole of the heart.

IV. *Variations of Pressure within the Sinus and Auricles together, the Ventricle being Excluded.*—The canula was either passed through the ventricle, whose base was ligatured round it into one auricle, or the ventricle was ligatured and cut away, and the outflow accomplished from the left auricle by a canula in the pulmonary vein. A slight increase of intra-cardiac pressure was soon shown in the diminished efficiency of the vagus. This effect comes out quite as well when the intact part is treated as a whole.

V. *Effect of Variations of Pressure within the Venous Sinus alone, the rest of the Heart being Excluded.*—A ligature was in this case tied between the sinus and the auricular part of the heart. Increase of intra-sinous pressure lessens the efficiency of the vagus in the same general manner as is considered above. Thus, variation of intra-cardiac pressure has a very marked effect in modifying the intensity with which the cardio-inhibitory fibres of the vagus act on the heart. It has been shown that increase of systolic pressure in the ventricle is not the cause of this influence on the vagus action. It has been made probable that the result is not due to increase of systolic pressure within the auricle, and therefore that the whole heart is affected in this respect by variation of intra-cardiac pressure only during its diastole. It has been found that increase of pressure within the ventricle at its diastole, such as would follow from semilunar insufficiency, has of itself probably no effect on the vagus action. All the effects which variation of intra-cardiac pressure have upon the efficiency of the vagus can be reproduced on the auricles and sinus together, or upon the sinus alone.

A large number of experiments of the same kind have been made upon the dog; but, though some decided intimation has been gained that in the mammal's heart also increase of the venous pressure diminishes the cardio-inhibitory efficiency of the vagus, the conditions of the mammalian heart are so difficult to regulate, and the vagus so quickly loses its irritability, that no satisfactory results have as yet been obtained.

Mr. H. H. Donaldson, A.B., of the Johns Hopkins University Laboratory, read a paper

ON THE VARIATION IN THE WORK OF THE HEART UNDER DIGITALINE. BY H. H. DONALDSON, A.B., AND M. WARFIELD, A.B.

The digitaline used was that of Merck, of Darmstadt. It has been shown that the heart is affected in the same way, whether it is isolated or not—Dybkousky and Pelikan, Traube, Bochur, etc.

In mammals with brain and cord intact, the pressure in the arteries rises under moderate doses of digitaline—Boehm, Traube, etc.; denied by Winogradoff. The rise might be due to more work done by the heart, or to a narrowing of the arterioles, or in part to both. The arterioles have been observed to contract in a frog, brain and cord intact, under digitaline—Boldt, Briesemann, Fothergill, Gouvat, etc.; denied by Böhm. It was found that if, in a mammal under digitaline, a section was made of the cervical cord, the pressure fell, not to rise again—V. Begold.

The complementary experiment was tried of first dividing the cord and then giving digitaline, but the arterial pressure did not rise—Traube, Böhm, etc.; denied by Görs and Ackermann. It would appear from this evidence that the rise of pressure was due to the arterioles—not to variation in the work of the heart.

In 1872 Dr. Rudolph, Böhm (Pfüger's *Archiv*) published a paper on the physiological action of digitaline, in which, relying on a series of experiments made directly on the isolated frog's heart, and his failure to see the constriction of the arterioles, he claimed that the work done by the heart under moderate doses of digitaline—.0005 gramme to .001 gramme—was increased.

He used the Ludwig-Coats method of feeding the heart. His inflow canula was put into the vena cava inferior, but the outflow was placed in the bulbous aorta below the semilunar valves, so that the entire weight of the arterial column bore continuously on the ventricle.

We used a method which has been perfected by Prof. Martin for feeding the isolated heart of the mammal. By this we were able to avoid many disadvantages connected with Böhm's method. By this means we were enabled to send first pure blood, then digitalinized blood through the heart, and then pure blood again, changing no condition, save that represented by the presence of digitaline in the blood. The venous and arterial pressure were always within normal limits. The doses varied from .0003 gramme to .005 gramme in 100 c.c. of blood.

The heart was dosed and recovered from four to six times in each experiment, and the experiments lasted from five to ten hours.

We have records of forty cases of dose and recovery, of which eight are more or less imperfect. From the remainder we conclude that the work done by the isolated heart of the spider terrapin is always decreased by digitaline, and that the amount of decrease bears a rough proportion to the size of the dose; that with small doses there is an initial quickening of the pulse; that it is the percentage of digitaline, not absolute amount given, which is the important factor in varying the heart. Our main conclusion is contradicted by one series of direct experiments by Böhm, on the frog's heart, but is supported by all the experiments so far made on mammals.

The terrapin's heart being as good a starting-point, then, for an inference, as the frog's heart, we can infer that the work of the human heart is decreased by digitaline, and not increased, as has been sometimes claimed.

The Faculty then entered upon the consideration of an

AMENDMENT TO THE CONSTITUTION,

which had been proposed at the last convention, regarding the raising of funds for the library. After a long and animated discussion, it was decided that each member of the Faculty residing in the city be assessed eight dollars ($8) yearly, of which four shall be appropriated to the Library Committee. The members in the counties shall be assessed three dollars ($3), two of which shall be applied to the same purpose.

After the election of new members, one of whom was a colored man, the Faculty adjourned.

APRIL 13TH.—THIRD DAY.

The President introduced to the Faculty, A. M. FAUNTLEROY, M.D., of Staunton, Va., who delivered the

ANNUAL ORATION,

taking for his subject the reciprocal influence of morbid physical and psychical conditions on the nervous system. After preliminary complimentary remarks to the Faculty, the orator spoke of the great importance of bearing in mind, in the observation and treatment of disease, the correlative action of body and mind, which is the foundation upon which medical psychology reposes. Waiving any discussion on the subject of idealism and materialism, he would assume the existence in the human organism of a mental force associated with, yet superior to, the vito-physical energies therein manifested. "The passage from the physics of the brain to the corresponding facts of consciousness, is unthinkable." We know the facts, but of the real bond of union between mind and body we are in absolute ignorance. The varying conditions of these are constantly reacting upon one another. These points were enforced by a number of pertinent illustrations. He showed how morbid feelings nursed and cherished, especially in those without mental occupation, may lead to the most distressing results, impairing all the functions of the body, which, then reacting upon the mind, intensifies the emotional disturbance, until every sensation assumes a morbid character, and the victim imagines himself a prey to all ills.

He traced the course by which a naturally nervous temperament, given up to long indulgence of emotional likes and dislikes, and to the baneful habit of self-consciousness and importance, loses at last all sense of social and ethical obligations. He spoke of the mental states in various diseases, such as gout, consumption, and hysteria. The changes thus far mentioned are not, however, those of insanity. Insanity, also, affords evidence of the reciprocal action of morbid bodily and mental influences. The morbid train of influences is usually long and complex, and is physical as well as moral. The air we breathe has been said to be full of psychological germs, calculated to infect the nervous system with disease. Heredity, and the various causes constantly at work to produce insanity in the different paths of life, were then touched upon, the disease being described as one from which neither genius nor strength of mind can guarantee us. He closed by referring to the great influence that the mind can exert over the body, and pointed to the example of this which America had given to the world during the past year.

A vote of thanks to Dr. Fauntleroy for his Address was passed unanimously, and he was elected an Honorary Member of the Faculty.

Dr. THOMAS B. EVANS, Chairman, read the *Report of the Section on Practice of Medicine.*

The Report of the Section on Obstetrics and Gynecology was read by THOMAS OPIE, M.D.

The Report of the Section on Materia Medica was presented by JOHN R. UHLER, M.D., Chairman.

The Report of the Section on Sanitary Science, was presented by Dr. JOHN MORRIS, Chairman. It was a

REPORT ON INFANT MORTALITY IN BALTIMORE,

with special reference to the diphtheria endemic during the past year in the Seventeenth Ward. The infant mortality of a city is a key to its healthiness. In nearly all cities the death rate among children is unnecessarily great. The report of the health department of this city for 1881, shows that out of the 8816 deaths for the year, 3919 or 44 per cent. were children under three years of age. Also, that 2467 or more than 28 per cent. of the deaths were from zymotic or preventable diseases. 630 of these were from diphtheria. In the Seventeenth Ward there were 280 deaths from zymotic diseases, of which 145 were from diphtheria. In the Tenth Ward there were but 3 deaths from diphtheria; in the Eleventh, 4; in the Eighth, 7. In respect to the sewerage, house-drainage, etc., the Seventeenth Ward bears a fair comparison with those wards in which there was no diphtheria or hardly any. The people of the Seventeenth Ward believe that the large infant mortality was caused, in a great measure, by the offensive odors produced by the fertilizing factories in the vicinity. These odors are due to what are called sludge acid acting upon dead fish and other animal matter. The odors are emitted during the mixing of the material in open tubs and other receptacles. These factories have been pronounced "dangerous to life and detrimental to health" by health boards in other cities, and their removal has been effected by legal means. People of the Seventeenth Ward have at last appealed to the courts. We know but little about the composition of the odors of the putrescent matter; we do know that many of these gases or their mixtures are hurtful to health. The gases from decaying fish are the most intensely stinking of all gases, and are probably the most deleterious to health; yet we cannot, by analysis, estimate the exact amount of the gas or its particular nature. Filth in the air is even worse than filth in the water, because less easy to escape from. The fact that in

the Seventeenth Ward, during the summer, windows and doors had to be kept shut when the wind blew from the factories, would of itself cause and favor the spread of disease. Other local causes were some open brick ponds and the noisome condition, at times, of the Cross Street stream. Milk is supplied chiefly from cows kept in the ward and fed on swill-slop. Diphtheria, wherever it occurs, is no doubt due to the decomposition of animal matter.

Dr. Morris then spoke of the fungoid theory of diphtheria and the influence of dampness on its production, stating it as his opinion that dampness, unless combined with filth, will not produce diphtheria, but is a necessary element in the generation of the poison.

Dr. Morris announced that the report on Sanitary Science would be supplemented by papers from Dr. William M. Kemp and Dr. W. Chew Van Bibber. The reading of these was deferred till to-morrow, and the meeting adjourned.

The President held a reception at his house for the Orator, A. M. Fauntleroy, M.D., to which the members were invited.

(*To be continued.*)

CORRESPONDENCE.

PRIVATE HOSPITALS FOR THE INSANE.

To the Editor of The Medical News:—

Sir: In an editorial in the number of The Medical News of April 15, 1882, on "Private Hospitals for the Insane," you refer to the application of the law in such cases.

The writer of this letter was one of the Committee appointed to prepare and urge upon the Legislature the adoption of the law of 1869, which regulates admission into hospitals for the insane, and well remembers the earnest discussions on the very point of the law to which you refer in the article, and the urgent necessity of providing against the very class of cases there discussed. The law was drawn so as to cover just such cases, and reference was made to this very plan of the reception of insane persons without the proper certificates. The section of the law reads thus: "Insane persons may be placed in a hospital for the insane by their legal guardians, or by their relatives or friends in case they have no guardians, but never without the certificate of two or more reputable physicians, after a personal examination made within one week of the date thereof, and this certificate to be duly acknowledged and sworn to or affirmed before some magistrate or judicial officer, who shall certify to the genuineness of the signatures and to the responsibility of the signers."

Now, any building or institution in which insane persons are kept for treatment under the care of a medical man is to that extent a hospital, no matter what other name may be given to it, and must by clear and necessary inference be amenable to the provisions of the law, and such was the clear intention of the framers of the law and of the Legislature which passed it.

We hold it to be a point about which there should be no dispute—that no person suffering from mental disorder should be placed under medical care and treatment in any home or institution unless all the terms of the law are fully and strictly complied with. There are cases constantly arising in which a question may be brought forward as to the actual fact and character of the mental disorder, but it is to just such cases that the provisions of the law need to be most carefully applied, for the obvious reason that the doubt should be settled before the person is sent to an institution, to avoid all the troubles and difficulties so likely to arise in regard to the detention of the individual.

I am, yours respectfully,

J. C.

Warren, Pa., April 17, 1882.

NEWS ITEMS.

BALTIMORE.

(*From our Special Correspondent.*)

The Meeting of the Medico-Chirurgical Faculty.—Your reporter has, doubtless, acquainted the readers of The News with the proceedings of the Medical and Chirurgical Faculty of Maryland, at its eighty-fourth annual convention, just concluded. The session was one of great interest, and must have produced results of permanent value. The forthcoming volume of the *Transactions* promises to take high rank among publications of a similar nature. Of especial importance were the contributions from the biological laboratory of the Johns Hopkins University, and particularly the paper of Prof. Martin, showing that variations in the pulse-rate of isolated hearts of dogs, and, presumably, of mammals generally, are independent of intra-venous or intra-arterial pressure within wide limits, but that variations of temperature of the blood produce constant and definite changes in the number of heart-beats. Dr. John Morris, from the Section on Sanitary Science, directed attention to the singular epidemic of diptheria that prevailed in 1881 in the Seventeenth Ward of Baltimore, where upwards of a hundred and fifty deaths from this disease were reported during the year, while in neighboring wards, similarly situated and under identical conditions of soil, water supply, drainage, etc., but two or three deaths from this disease occurred. The prevalence of odors of putrefaction, emanating from a number of fertilizer factories in the vicinity, was popularly considered the exciting cause of the epidemic,

An action that cannot fail to exert a decidedly beneficial influence upon the profession of the city and State, was the definite provision for the medical library now under the control of the Faculty. This library is now in regular receipt of about a hundred and twenty-five American and foreign medical periodicals, and contains more than three thousand volumes.

The action of a local medical society in black-balling a candidate for membership on account of his color, has been reported through the public and medical press, and has been severely commented upon. The recent meeting of the Faculty was considered a favorable opportunity to correct the impression that any number of medical men in Baltimore would allow their prejudices to control their opinions to so great an extent as to cause them to consider a mere accident of birth a barrier to admission to a society having scientific aims. The friends of the gentleman concerned, both in justice to him and the good name of the profession, proposed him for membership in the Faculty, and he was elected without a dissentient voice. He is a graduate of Harvard Medical School of some years' standing, and is personally and professionally entirely unobjectionable.

VIENNA.

(*From our Special Correspondent.*)

The Influence of the Emptying of Blood-vessels, after Esmarch's Method, upon the Resorption of Fluid Substances.—Dr. Anton Wölfler has determined, by a series of experiments upon animals, that, after emptying the blood-vessels of a portion of the body, according to Esmarch's method, substances placed upon wounds situated upon the distal side of

the tube are not absorbed so long as the elastic band remains in place. Through further experiments, he found out that the entire bloodless part, throughout the constriction, remained free from these substances.

From these experiments, Wölfler considers himself justified in affirming that the danger of septic absorption is much lessened by the application of the Esmarch bandage and tube, and advises the occlusion of the wound before, or *immediately* after, the removal of the elastic ligature.

NERVE-STRETCHING.—At a recent meeting of the College of Physicians, Dr. Mikulicz, Universitäts Docent, summarized his experience in nerve-stretching. After reviewing the literature of the subject, Dr. Mikulicz spoke of eight cases of tabes, and one of multiple cerebro-spinal sclerosis, observed by himself. The conclusions drawn from the reported cases, and his own experience, are as follows:

Nerve-stretching gives a great percentage of cured cases in neuralgias, both trigeminal and ischiatic.

Less favorable results are obtained from stretching peripheral motor nerves. Important disturbances of motor function almost invariably result. The operation, therefore, in the latter class of cases is of doubtful value.

In general neuroses, especially in traumatic tetanus and reflex epilepsy, many brilliant cures have been effected. For this reason the operation, in this class of cases, is indicated as a last resort.

In affections of the spinal cord, and especially in tabes, up to the present time no case has been reported cured. Although, here and there, decided amelioration of many symptoms, in particular pain, specially tactile sensibility has been observed.

Upon ataxy, itself, the operation exercises a very doubtful influence, so that in tabes, nerve-stretching can be employed, not as a means of radical cure, but only as an expedient in abandoned cases, where pains are very severe.

THE AMERICAN SURGICAL ASSOCIATION.—The third annual meeting of this Association will be held in this city on Wednesday, May 31st, June 1st and 2d. Papers on interesting surgical subjects will be read by Profs. Cabell, of the University of Virginia, Moses Gunn, of Chicago, Hodgen, of St. Louis, Dawson, of Cincinnati, Briggs, of Nashville, Drs. Levis, of Philadelphia, Weist, of Indiana, and others. It is expected that the discussions on the subjects presented will be very full and interesting. There will also be an exhibition of surgical instruments and appliances by the prominent instrument makers of the country.

At the last meeting of the Association held at Coney Island, September 13 and 14, 1882, papers were read by Drs. R. A. Kinlock, of Charleston, S. C.; Henry F. Campbell, of Augusta, Ga.; J. H. Packard and S. W. Gross, of Philadelphia; E. M. Moore, of Rochester, N. Y.; and H. W. Brock, of West Virginia.

The officers of the Association are Prof. S. D. Gross, President; Prof. Jas. R. Wood and L. A. Dugas, Vice-Presidents; Dr. J. R. Weist, Secretary; Dr. J. H. Packard, Treasurer; Dr. J. Ewing Mears, Recorder; Council, Drs. J. C. Hutchinson, R. A. Kinlock, W. F. Briggs and J. W. S. Gouley; Committee of Arrangements for next meeting, Drs. J. Ewing Mears, Chairman, S. W. Gross and R. J. Levis.

Surgeons of the city and country are cordially invited to be present at the ensuing meeting of the Association.

THE PUBLIC HEALTH.—For the *week ending April 8*, the following additional items are presented: There were 2 new cases of *small-pox* reported in Brooklyn, but no deaths; 17 deaths in New Orleans; 13 new cases sent to small-pox hospital at St. Louis, and 8 deaths in that institution; 2 new cases in Buffalo, but no deaths; 1 new case and 1 death in Detroit; and 1 death in Omaha, Neb. From *cerebro-spinal meningitis*, there were 8 deaths in Buffalo, the highest mortality reported in the past eight weeks; and 1 death in Wilmington, Del. From *croup*, 5 deaths in Brooklyn; and 1 each in St. Louis, New Orleans, Detroit, Wilmington, Del., and Omaha, Neb. *Diphtheria* caused 12 deaths in Brooklyn; 8 in St. Louis; 4 each in Buffalo and Detroit; 3 in the District of Columbia; 2 each in New Orleans and San Francisco; and 1 in Salt Lake City. *Typhoid fever* caused 5 deaths in St. Louis; 4 in San Francisco; 3 in Buffalo; and 1 each in Brooklyn, New Orleans, Wilmington, Del., and Salt Lake City. *Malarial fever* caused 8 deaths in Brooklyn; 4 each in St. Louis and New Orleans; and 1 in Buffalo.

Scarlet fever still continues prevalent in Brooklyn, the deaths for the week (31) being slightly in excess of the number for any of the preceding seven weeks. There is also an increased prevalence of the disease in St. Louis, the 13 deaths reported being an excess of 6 over the number for the preceding week. There were 8 deaths in Buffalo; 2 each in San Francisco and Detroit; and 1 in Wilmington, Del.

From *measles* there were 7 deaths in Brooklyn, the same as in the preceding week; and 4 deaths in Buffalo. From *whooping-cough*, 4 deaths in Brooklyn; and 1 each in San Francisco and Buffalo.

Consumption caused 41 deaths in Brooklyn; 16 each in the District of Columbia and St. Louis; 12 in San Francisco; 10 in New Orleans; 6 in Buffalo; 3 in Detroit; 2 in Wilmington, Del.; and 1 each in Davenport and Omaha, Neb. *Pneumonia* caused 20 deaths in Brooklyn; 10 each in Buffalo and San Francisco; 12 in the District of Columbia; 6 each in St. Louis and New Orleans; 3 in Wilmington, Del.; 2 in Davenport; and 1 each in Vicksburg and Detroit.

For the *week ending April 1*, there were reported in San Francisco, 2 deaths from small-pox; 2 from cerebro-spinal meningitis; 1 from croup; 3 from diphtheria; 1 from typoid fever; 3 from scarlet fever; 6 from measles; 18 from consumption; and 10 from pneumonia.

The returns of deaths from prominent causes for the *week ending April 15*, are as follows:

Small-pox.—A gradual falling off in the number of deaths from this disease is to be noted. The maximum mortality appears to have been reached in Cincinnati, where the deaths were 41 against 50 for the preceding week. There is also a decrease in the mortality from this cause both in New York City and in Philadelphia. The deaths for the week were as follows: New York City, 5; Philadelphia, 8; Pittsburg, 5; Cincinnati, 41; Chicago, 20; Louisville and Memphis, 2 each; and Hudson Co., N. J., Wilmington, Del., and Dayton, O., each 1. There were 19 new cases reported in Pittsburg; 13 in Dayton, O.; 8 in Brooklyn; 3 in Richmond; and 2 in Louisville and in Milwaukee.

Cerebro-spinal Meningitis.—This disease caused 8 deaths in New York City; 2 in Philadelphia; 4 in Pittsburg; 2 in Chicago; and 1 each in Hudson Co., N. J., Milwaukee, Richmond, Va., Louisville, and Memphis.

Croup.—There were 8 deaths from croup in New York City; 10 in Brooklyn; 10 in Philadelphia; 3 in Hudson Co., N.J.; 3 in Milwaukee; 2 in Boston; and 1 in Louisville.

Diphtheria.—The mortality for the week from this cause was as follows: New York City, 34 deaths; Brooklyn, 17; 12 in Hudson Co., N.J.; Philadelphia, 8; Boston 9, and 10 new cases; Chicago, 11; Pittsburg, 3; Portland, 2; and Cincinnati, New Haven, Dayton, O., and Nashville, each 1 death.

Erysipelas.—There were 9 deaths from erysipelas in

New York City; 2 each in Brooklyn, Philadelphia, and Cincinnati; 4 in Boston; and 1 in Louisville.

Scarlet Fever.—An increase in the mortality from this disease is observed in New York City and Philadelphia. In the former city there were 75 deaths, in the latter, 9; 24 in Brooklyn; 7 in Hudson Co., N.J.; none in Boston, but 12 new cases; 2 in Cincinnati; 5 in Chicago; and 1 in New Haven. 16 new cases were reported in Milwaukee.

Typhoid and Typhus Fevers.—There were 25 deaths from typhoid fever in Philadelphia, the highest mortality recorded for many weeks. New York City reports 3 deaths; Hudson Co., N. J., 5; Boston and Indianapolis, each 2; Cincinnati, 4; and Brooklyn, Louisville, and Jacksonville, Fla., each 1 death. Two deaths from typhus fever were reported in New York City.

Malarial Fever.—There were 13 deaths from this disease in New York City; 2 in Philadelphia; and 1 each in Louisville, Indianapolis, New Haven, Wilmington, Del., Nashville, and Memphis.

Measles and Whooping-cough.—Measles caused 33 deaths in New York City; 6 in Philadelphia; 5 in Brooklyn; 6 in Pittsburg; 7 in Chicago; and 4 in Cincinnati. The deaths from whooping-cough were 18 in New York City; 5 in Brooklyn; 2 in Philadelphia; and 1 each in Boston, Providence, Wilmington, Del., and Portland.

Consumption and Pneumonia.—With a few exceptions, there has been a still further reduction in the deaths from both consumption and pneumonia. From consumption there were 113 deaths in New York City; 48 in Philadelphia; 35 in Boston; 34 in Brooklyn; 22 in Chicago; 13 in Cincinnati; 10 in Providence; 9 in Hudson Co., N. J.; 6 each in Indianapolis, New Haven, Louisville, and Wilmington, Del.; 5 in Richmond; 3 in Pittsburg; 2 in Jacksonville, Fla. From pneumonia, there were 99 deaths in New York City; 35 in Brooklyn; 36 in Philadelphia; 18 in Hudson Co., N. J.; 13 in Boston; 7 in Providence; 6 in Cincinnati; 5 in Richmond; 19 in Chicago; 3 each in Milwaukee, Indianapolis, and Portland; 2 each in New Haven, Louisville, and Memphis.

HEALTH IN MICHIGAN.—Reports to the State Board of Health, for the week ehding April 8, 1882, indicate that diarrhœa and diphtheria increased, and that neuralgia, typho-malarial fever, influenza, measles and rheumatism decreased, in area of prevalence. Including reports by regular observers and by others, diphtheria was reported present during the week ending April 8, and since, at 18 places; scarlet fever at 7 places; measles at 5 places, and small-pox at 3 places in all, as follows: at Battle Creek, April 4th; at Flint (one case) and at Milford, April 8, 1882. It is unofficially reported that small-pox is present at Manistee.

CONSUMPTION IN PROVIDENCE.—The statistics of consumption in Providence, as given in the last two monthly reports of the City Registrar, show some very surprising and interesting results.

Dividing the population and the decedents from consumption into two classes, American and foreign, *by parentage*, the statistics show that in one class a remarkable change in the mortality from this disease has been going on in Providence during the last twenty-five years.

Thus, in the five years from 1856 to 1860, inclusive, of all the decedents from consumption in Providence, 56.45 in each 100 were of American parentage, and 43.55 in each 100 were of foreign parentage.

But in 1881 the proportions were 33.43 in each 100 of American parentage, and 66.57 in each 100 of foreign parentage.

The change has also been *continuous* through the whole period, each quinquennial period from 1856 to 1881 showing a regular decrease, from 56.45 to 33.43, in the proportion of decedents from consumption of American parentage, and a regular increase, from 43.55 to 66.57, in the proportion of those of foreign parentage. The population of the city in 1855 was 59 of American parentage and 41 of foreign parentage in each 100, while in 1880 it was 46 American and 54 foreign in each 100.

These figures would seem to indicate that during this period there had been an actual decrease in the mortality from consumption in the American population by parentage, and it might be inferred that there had also been a corresponding increase of consumption in the foreign population by parentage. But this does not necessarily follow. The actual results in the case must depend upon a comparison of the decedents from consumption of each class with the living population of each class at the same definite periods. This is given in the mortality report for March.

At four different periods we have had a census of the city, which showed *the parentage* of the population. Taking these periods and comparing the decedents from consumption, by parentage, with the population by parentage in the same periods, we find the following results for the city of Providence:

POPULATION OF AMERICAN PARENTAGE.

1856—One death from consumption in 268.2.
1865—One death from consumption in 310.1.
1875—One death from consumption in 415.0.
1880—One death from consumption in 435.2.

POPULATION OF FOREIGN PARENTAGE.

1856—One death from consumption in 262.6.
1865—One death from consumption in 248.8.
1875—One death from consumption in 288.4.
1880—One death from consumption in 268.0.

TOTAL POPULATION.

1856—One death from consumption in 266.
1865—One death from consumption in 280.
1875—One death from consumption in 336.
1880—One death from consumption in 326.

The preceding figures show several importants facts:

1. In regard to the total population, there has been a considerable decrease in the ratio of mortality in the twenty-five years past; from one death in 266 to one in 326 of the population in a year. In a population of 100,000 this decrease in the rate from consumption would amount to a decrease of 69 in the number of deaths annually.

2. In the population of foreign parentage the rate of mortality from consumption has changed only very slightly in the past twenty-five years. In a foreign population, by parentage, of 100,000, the rate of mortality from consumption in 1856 would give 380 deaths annually; the rate of 1880 would give 373 deaths annually. The rate of mortality from consumption in the population of foreign parentage in 1880 was almost exactly the same as the rate in the population of American parentage in 1856.

3. In the population of American parentage in Providence there has been a most remarkable change in the mortality from consumption during the last twenty-five years. In 1856, there was, in this population, one death from consumption in 268.2; in 1880, there was only one death in 435.2. This decrease in the rate of mortality has also been continuous during the whole period, as will be seen by the figures already given. Let us see the effects of this decrease.

1. There were 111 deaths from consumption, in 1880, in the population of American parentage in Providence;

if *the rate* had been the same as in 1856, the number of deaths would have been 180, instead of 111.

2. There were 211 deaths from consumption, in 1880, in the population of foreign parentage; if the rate in this population had been the same as in the American population, the number of deaths from consumption, in 1880, would have been 130, instead of 211.

3. In a population of American parentage of 100,000, the rate of mortality from consumption, as it was in 1856, would give 373 deaths in a year; while the rate as it was in 1880 would give only 229 deaths in a year.

It would be interesting to inquire into the causes of this diminution of consumption among a portion of the population of the city; and the reasons why this diminution is in one portion of the population and not in the other. But we may not pursue the subject further at this time.

The Kentucky State Medical Society and the New York Code.—At the recent meeting of the Kentucky State Society, Dr. L. P. Yandell moved that a committee be appointed to express the sentiments of the Kentucky State Medical Association concerning the action taken by the eighty doctors representing the medical profession of the State of New York. The committee met and subsequently presented the following report:

Whereas, Resolutions have recently been adopted by the State Medical Association of another State subversive of the Code of Ethics of the American Medical Association,

Resolved, That the Kentucky State Medical Society regards the Code of Ethics of the American Medical Association as the best system of ethics for the guidance of honorable medical men now in existence, and that we hereby declare our unfaltering and firm adherence to its principles, and must deprecate any alteration at this time in its honored teachings.

Resolved, That our representatives at the approaching meeting of the American Medical Association be and are hereby instructed to give their votes and influence in favor of unqualified adherence and fidelity to the Code as it now stands.

Munificent Bequests.—According to the will of the late Dr. Edward L. Beadle, over one hundred thousand dollars are bequeathed to numerous charitable and medical institutions of New York, of which the New York Academy of Medicine, the Association of the Alumni of the College of Physicians and Surgeons, and the Medical Department of Columbia College, each receive five thousand; his library is also given to the New York Academy of Medicine.

Translations of American Books.—Prof. Samuel W. Gross's treatise on "Sterility, Impotence, and Allied Disorders of the Male Sexual Organs," is to be translated into the Russian language, and Prof. Duhring's treatise on "Diseases of the Skin" is being translated into Italian by Dr. A. Scambelluri, of Naples, and will be published at Naples.

The Medical Education of Women at Harvard.—The committee upon the medical education of women at Harvard College presented a report, upon which it was voted (13 to 12) that in the opinion of the Board of Overseers it was not advisable for the University to give any assurance or hold out any encouragement that it will undertake the medical education of women by Harvard College in its medical school.

Prof. Von Bruns, the Director of the Surgical Clinic at Tübingen, who has long been in a state of bad health, has, at his own desire, been pensioned off after a service of almost forty years. The Medical Faculty of the University have presented an address to him, in which his great service to surgery, especially as the founder of laryngeal surgery, are set forth.—*Med. Times and Gaz.*, April 1, 1882.

Dr. John P. Gray.—The profession will be glad to learn that Dr. Gray continues to convalesce favorably. He rode out last Sunday for the first time since the attempt on his life.

Medical Congress at Athens.—On April 18th a congress of Greek physicians and naturalists from all parts of the world met at Athens.

Society of the Alumni of the Medical Department of the University of Pennsylvania.—At the annual meeting the following officers were elected for the year 1882: President, John L. Atlee; Vice-Presidents, Alfred Stillé, Meredith Clymer, W. S. W. Ruschenberger, and Thomas J. Gallaher; Treasurer, Thomas Holmes Cathcart; Corresponding Secretary, H. R. Wharton; Recording Secretary, Horace Y. Evans; Orator, Hiram Corson, of Penna.

To fill the vacancy created by the recent death of the treasurer elect, the executive committee have elected Dr. Charles M. Seltzer, 1530 Fairmount Avenue, Philadelphia.

The British Association for the Advancement of Medicine by Research.—A meeting for the organization of this association, called by the Presidents of the Colleges of Physicians and Surgeons of London, was held in London on March 27, Sir William Jenner, Bart., presiding. In stating the objects of the association, Sir William Jenner said that, although there were a number of societies to which those who had made scientific researches might communicate their results, there was at present none to guide research, and this want he hoped this association would supply. It was not intended that the association should limit itself to any one object, but, being founded on a very broad basis, should carry on its work in all departments. He hoped it would exert its influence on the study of therapeutics, and investigate the effects of sewer gas and foul air upon the human constitution, and in such studies they would want the combined work of physiologists, pathologists, and chemists. Another subject that lay ready to hand was the influence of light, moisture, subsoil, infection, and injury upon tubercular disease. If such investigations were carried out by the right men in the right spirit he was confident the benefits to humanity would be incalculable. Every advance in physiology was a stepping-stone to an advance in pathology, for the latter is founded on the former; and he trusted the proposed association would aid and stimulate professed physiologists. Sir George Jessel, Mr. Spottiswoode (President of the Royal Society), Sir James Paget, Sir J. Lubbock, Prof. Tyndall, Sir Risdon Bennett, Mr. Erichsen, Dr. Andrew Clark, Sir Joseph Hooker, Dr. Acland, and Dr. W. B. Carpenter participated in the business of organization.—*Lancet*, April 1, 1882.

Mares' Milk.—Dr. Carrick, of St. Petersburg, has, according to the *British Medical Journal*, recently been in London with the view of making known to persons likely to take a practical interest in the subject, the result of some experiments which he has been carrying on in Russia as to the condensation of milk from the mares in the Steppes, with the view to the introduction of such condensed mares' milk for the purpose of infant alimentation, and as a basis for the manufacture of koumiss. It is well known that the composition of

mare's milk more closely resembles human milk than does cow's milk, and is, therefore, it is thought, likely to be much more useful for the purpose of infant feeding than the condensed milk now so largely used for the purpose. The process which Dr. Carrick has employed furnishes condensed and desiccated mare's milk, without the addition of any foreign substance whatever. The result of Dr. Carrick's experiments having been satisfactory, both as to the process of manufacture employed and as to the favorable results attained in the nutrition of infants and invalids, he hopes to be able to find means shortly of producing this novel element of infant alimentation on so large a scale as to afford the means for introducing it into general use. The project is one of considerable interest, and will, we hope, be successfully carried out.

Malformation of the Male External Organs.—In the *Gazette Medicale de Strasbourg*, Dr. Schrumpf, of Wesserling, describes a remarkable anomaly of the external organs in a male child. The penis and testes were enclosed in one common sac of integument, a scrotum, with a projection not one quarter of an inch long from its upper part, representing the prepuce. The urine issued during micturition from a very narrow opening in the prepuce. The corpora cavernosa could be detected on palpation, and appeared to be normal. The case is described as unique; but it is only an extreme form of the fusion of the integuments of the penis with the scrotum posteriorly—a result of arrested development of the genital tubercle. To remedy the malformation, when the child was a year old, the copora cavernosa were raised from the scrotum with as much integument as possible, which was then severed from the scrotum, and united by sutures behind the penis, the scrotal wound being also sewn up. Circumcision was performed at the same time. The result was quite satisfactory.—*British Med. Journ.*, March 18th, 1882.

The Secrets of our Patients.—The *Journal de Médecine de Paris*, contains a letter from a correspondent detailing a hypothetical case, in which the medical attendant delivers a woman of a syphilitic child, when, to his knowledge, the father is exempt from the disease; and desires to know whether it is the duty of the medical attendant to inform the father of the nature of the disease from which the child is suffering. M. Diday replies to the letter, and maintains that such a case offers no exception to the general rule, that the secrets of our patients are inviolable. He points out that, when the child is born dead, as a rule, no questions would be asked; and, if any were, it would be sufficient to say that there was commencing putrefaction; but when syphilitic symptoms are manifested by the child after birth, he thinks the medical man can easily discover the real state of things; and he believes that it is only necessary for him to insist on the mother nursing the child herself, so as to avoid infecting anyone else; and should she herself show any symptoms of the disease, to submit herself at once to treatment, and to persevere in it actively and to the end. We may add, that we quite agree with M. Diday; any other view is obviously founded on a principle which would make one law for the husband, and another for the wife; for who ever heard of a medical man feeling himself bound to tell a wife that her husband had acquired syphilis?—*British Med. Journal*, March 18, 1882.

Paris Faculty of Medicine.—Among the troublesome legacies bequeathed by Prof. Paul Bert on the collapse of his brief and turbulent hold of power, was one devised while *in articulo mortis* to the Faculty of Medicine. We announced some time since that Prof. Hayem had been authorized by a small majority of the Faculty to exchange his chair of Therapeutics for that of Pathological Anatomy, vacated by Prof. Charcot on his appointment to the new chair of Pathology of the Nervous System. Hitherto the recommendations of the Faculty have always been complied with by the Minister of Public Instruction; but Prof. Paul Bert, without discussing the matter with that learned body, at once declared the chair of Pathological Anatomy vacant, and submitted to *concours*. Since he has been succeeded by M. Ferry, nothing has been heard either of the *concours* or the permutation of chairs; and the Faculty meeting again in council has presented a new list of three names to the Minister, in order that he may, as usual, choose one—this being indeed nominal, as the name heading the list has always hitherto been considered as chosen. The choice made has been fatal to M. Hayem's pretensions—many of the Faculty being much opposed to the principle of permutation of chairs. There were thirty voters present, the required majority being therefore sixteen, For the first place on the list M. Cornil received sixteen, and Prof. Hayem fourteen votes; M. Lancereaux was then placed second, and M. Grancher third.—*Med. Times and Gaz.*, March 25, 1882.

Micro-photography.—MM. Encausse and Canésie have introduced such modifications into the method of micro-photography as now to be able to obtain photographs of objects magnified 6400 diameters.—*Union Méd.*, March 19, 1882.

Cremation of Dissected Bodies.—The Municipal Council of Paris, adopting the recommendation of Dr. Bourneville, advises the cremation of the remains of bodies employed in the different medical schools for anatomical purposes. From 1878 to 1880, 10,144 bodies were employed at the Ecole Pratique and in the anatomical rooms at Clamart for anatomical purposes.—*Gaz. Méd. de Paris*, March 11, 1882.

The Franklin Reformatory Home for Inebriates, Philadelphia.—After an uninterrupted service of ten years, Dr. Robert P. Harris has resigned the post of attending physician, and Dr. James Graham has been appointed his successor. The fiscal year of the Home ended March 31, with fifty-two inmates in the house. From 25 to 30 men are received monthly, and the average under care is from 45 to 50. The number of applications steadily increases, and was greater in the last year than in any former one. There is now no home in Philadelphia for inebriate women; such institutions have failed in our cities, as it has been found impossible to induce those of a better class to become inmates, or to reform those whose drunkenness is associated with other immoralities. The class of women known as snuff-chewers is ready to enter, but will not reform except temporarily. There are former inmates of the first, second, and third years of the Franklin Home who have never broken their pledges since they left.

A New Neurological Journal.—The first number of the *Neurologisches Centralblatt*, published by Dr. E. Mendel, Privat Docent in the University of Berlin, appeared on January 27. It is a bi-monthly journal, and contains original articles and reviews on subjects relating to the anatomy, physiology, and pathology of the nervous system, mental medicine, and medico-legal questions.

Deaf-mutism.—Dr. Boucheron lately made a communication to the Medical Section of the Paris Academy, in which he expressed an opinion that the co-existent states of deafness and dumbness so often observed are owing to the compression of the acoustic

nerve. This compression is the result of the vacuum existing in the cavity of the tympanum. This vacuum causes the external air to press on the membrane, and thus on the ossicula, and finally on the liquid of the labyrinth and the nerve. By frequent insufflation into the Eustachian tube, M. Boucheron succeeds in destroying the vacuum, and thereby the pressure on the nerve, and deafness is cured. M. Boucheron has restored in some cases, to the apparently deaf and dumb, and even idiots, the faculty of hearing and of speech.—*British Med. Journal*, March, 18, 1882.

PROF. BROWN-SEQUARD has declined the position of Court Physician at Madrid.

CANADIAN BOARD OF HEALTH.—The Ontario Public Health Bill, which provides for the creation of a Provincial Board of Health, consisting of seven members, of whom at least four must be medical practitioners, two only receiving remuneration, has passed its third reading and becomes a law. Dr. Wm. Oldright, Lecturer on Sanitary Science in the Toronto School of Medicine, has been appointed Chairman.

LARGE BRAIN AND SKULL.—Dr. Christopher Tompkins, of Richmond, reports the autopsy of a negro man, aet. 32, twice a murderer and twice an inmate of the Central Lunatic Asylum, of Virginia, the first time for some months, the last time for nine years, terminating with his death. He was six feet two inches in height, of spare build, and died of rapid consumption. Two hours after death it was found that the brain weighed 70 ounces, its substance, as well as its membranes and the bones of the skull, appearing healthy. The dimensions of the skull were: Antero-posterior diameter, 8¾ inches; transverse diameter, 6⅜ inches; vertical diameter, 6 inches; its weight was 3 pounds. The capacity of the cranium was equivalent to the bulk of over a pound more of clover seed than that of two typical skulls of a negro and Caucasian respectively, selected from a collection of 54, with a view to comparison. The excess was situated, however, chiefly in the posterior segment of the skull. This subject when sane, was characterized by stupidity; during his insanity he was a violent masturbator. It was estimated that, if the brain had been weighed immediately on its removal, and with membranes entire, it would have weighed 72 ounces.—*Tran. Med. Soc. of Virginia*, Jan. 1882.

RESOLUTIONS OF THE FACULTY OF JEFFERSON MEDICAL COLLEGE ON THE DEATH OF PROF. JOSEPH PANCOAST.—At a special meeting of the Faculty held at the College March 10th, the Dean notified the Faculty of the death of Joseph Pancoast, Emeritus Professor of Anatomy in Jefferson Medical College, which occurred on the 7th inst., and the following resolution was passed and directed to be published:

"The Faculty having heard with profound regret of the death of their late colleague, Prof. Joseph Pancoast, desire to record their sentiments, as follows:

Dr. Pancoast's connection with this institution as a professor extended over a period of upwards of a third of a century, having begun in 1838, when he was called to the Chair of Surgery, which he occupied until the re-organization of the College in 1841, when he was transferred to the Chair of Anatomy, which he filled with distinguished ability until 1873, when he was succeeded by his son, Dr. Wm. H. Pancoast. During all this time Dr. Pancoast's zeal as an earnest and accomplished teacher, his skill as a bold and brilliant operator, and his authorship of various important works, contributed largely to extend the name and reputation of the institution, not only at home, but in foreign countries. Warm and genial in his temperament and impulses, he was always kind and affable in his intercourse with his pupils, and eminently popular as a lecturer; while his vast professional knowledge, his wide familiarity with men and things, and his practical common-sense views, rendered him a safe and valued adviser in the consultations of his colleagues. Socially, he was highly agreeable and companionable, adding to the ground-work of strong sense and a well-cultured mind, the charm and grace of manner of the well-bred gentleman, heightened and set off by his varied reading in different fields of literature. In his death the medical profession of the United States has lost one of its greatest and most honored members, and this College one of its most successful teachers, and most able supporters.

The Faculty of the College desire herewith to extend to the family of their late colleague their warmest sympathy in their bereavement."

NOTES AND QUERIES.

CERTIFIED THERMOMETERS.

To the Editor of THE MEDICAL NEWS.

Dear Sir:—I recently purchased a thermometer marked J. Hicks, London, No. 92,245, with a certificate from the Yale College Observatory, stating that on October 7, 1881, the thermometer had been compared with instruments in the observatory, and corrected as follows, etc. This certificate also states that mercurial thermometers increase their readings with age, and during the first year as much as one degree. The certificate does not say that the thermometer was in their possession one year. If it was not, of what value is such a certificate? Yours, truly,

D. G. M. TROUT.

DECATUR, ADAMS CO., April 6, 1882.

[In order to know the value of the observatory certificate in the above case, it must be known how long the thermometer was closed before it was graduated. It is usually the custom of the best makers to seal thermometers and lay them aside for a year or more before graduation, as by that time the contraction has mainly ceased; if, therefore, our correspondent can learn that this precaution was observed in the case of his instrument, the corrections by the observatory officials may be taken as representing the exact readings.

We believe the Winchester Observatory will receive packages of thermometers from manufacturers, seal them up, and keep them for a year, and then correct them, the length of time between manufacture and graduation being certified in their report.—ED.]

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 11 TO APRIL 17, 1882.

GARDNER, W. H., *Captain and Assistant Surgeon.*—Relieved from duty at Fort Concho, Texas, and assigned to duty at Fort McKavett, Texas, as Post Surgeon, relieving Surgeon Waters.—*S. O. 36, Department of Texas, April 10, 1882.*

BYRNE, CHAS. B., *Captain and Assistant Surgeon* (Fort Barrancas, Florida).—Assigned to temporary duty at Mt. Vernon Barracks, Alabama, during absence of Assistant Surgeon Cunningham.—*S. O. 41, Department of the South, April 12, 1882.*

FINLEY, *Captain and Assistant Surgeon.*—Having reported at these headquarters, is assigned to duty at Fort Concho, Texas.—*S. O. 35, Department of Texas, April 8, 1882.*

CORBUSIER, WM. H., *Captain and Assistant Surgeon.*—Assigned to duty as Post Surgeon at Fort Mackinac, Michigan.—*S. O. 67, Department of the East, April 15, 1882.*

KING, WM. H., *Captain and Assistant Surgeon.*—To be relieved from duty in the Department of the East, on receipt of this order, and then to proceed to his home. Granted leave of absence until further orders on account of sickness.—*S. O. 82, A. G. O., April 10, 1882.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

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THE MEDICAL NEWS.

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ORIGINAL LECTURES.

ON MEMBRANOUS LARYNGITIS: CROUP.

A Clinical Lecture.

BY WILLIAM T. PLANT, M.D.,

PROFESSOR OF THE DISEASES OF CHILDREN IN THE SYRACUSE UNIVERSITY, NEW YORK.

GENTLEMEN: The subject of this morning's lecture is a disease that has for the physician a melancholy interest. Choosing for its victims, as it is apt to do, children who are in robust health, its coming is unheralded and unexpected; it runs a short and terrific course, and very often it has a fatal ending. It occurs, too, at the most interesting and lovable period of child-life, namely, between the second and fifth years. Occasionally it attacks those who are somewhat older, but it is infrequent in nurslings and almost unknown to adults.

The term *croup*, though it has reference to a single symptom only, answers very well the purpose of a name. It is a Scotch word which means to speak with a harsh, gruff voice.

Though a disease of marked individuality, with an existence coeval, doubtless, with that of the human race, it appears never to have been clearly described until 1765, when Dr. Francis Home, of Edinburgh, published "An Inquiry into the Nature, Cause, and Cure of Croup."

It has often happened that the ailments of royalty and other great personages have been a benefit to medical science by stimulating research. This is notably true of croup. In 1806 or 1807 the little son of the King of Holland died of it, whereupon his uncle, Napoleon Bonaparte offered a prize for the best dissertation upon it. The offer was responded to by eighty-three essayists, of which two were given prizes and many others had honorable mention.

Croup is essentially an acute inflammation of the mucous membrane of the larynx and trachea. Probably in most cases the sub-mucous tissues are likewise involved. As a result of this inflammation, there is an exfoliation of degenerate and enlarged epithelial cells, and, according to most pathologists, a transudation of fibrin. Pus cells are also produced in abundance. These three elements, epithelial and pus cells, and fibrin, form themselves into a membrane of variable thickness and extent. The membrane may be as thick as a silver dime or of gossamer-like tenuity. It may consist of one or more isolated and ragged-edged patches, or it may constitute a perfect lining of the larynx and trachea and of the primary bronchi. It may even dip down into the smaller air tubes, and stand, like a tree inverted, with its trunk at the throat and its hundred branches extending in every direction through the lungs. This membrane is not endowed with vitality, nor has it any firm attachment to the underlying tissues. It can readily be peeled off without injury to the mucous membrane over which it is spread, and within a very few days after its formation it begins to soften and break down from putrefaction. It is usually of a light gray or ash color, and its free surface is often covered by a yellowish layer of muco-pus.

This adventitious formation is not, however, the sole outcome of the inflammation. The mucous membrane tself is thickened. Serum escapes from the engorged blood-vessels, producing infiltration of the cellular tissue-œdema.

Now, remembering how small the glottis is in a little child, and how, in this state of active inflammation, it is encroached upon by œdema, by a swollen mucous membrane, and by the new layer, we are prepared to appreciate the cause and import of the terrific symptoms that are present in every case of membranous laryngitis.

The causes of croup are mainly atmospheric. It is oftenest met with in situations where coldness and dampness are conjoined. It is frequent with us from November to April, but the summer months are not wholly exempt from it.

Symptoms.—The initial symptoms are usually so slight as scarcely to attract attention. They are the ordinary phenomena of a cold in the head, as some sneezing and nasal discharge, and some fever, especially at night. Quite likely, there is some cough and hoarseness, and a sore throat, not sufficient, however, to occasion any apprehension as to the safety of the child. There is but one of these symptoms that could lead you to a suspicion of the trouble that is impending, and that is hoarseness. A child with a common cold is not, usually, hoarse, and when it is so, there is ground for apprehension and watchfulness.

In a day or two, some of these symptoms become more pronounced; the cough is more frequent, and its dryness and hoarseness are more apparent. As compared with the clangous resonance of *spasmodic* croup, we would call it a suppressed cough. The voice is hoarse, stifled, and indistinct, and articulation seems to be painful. The child breathes with manifest effort. Inspiration is prolonged and attended with a stridor—a harshness, as though the air was drawn through a narrowed orifice. With the stethoscope you may locate exactly the point of obstruction. The fever has increased, and the little one has lost interest in its play. By spells the symptoms are intensified, but they do not at any time wholly disappear. You will often observe nightly exacerbations, and the morning may bring a remission so considerable as to lead to a false hope of recovery. By this time, the nature of the malady is evident, though probably it was not so at first. I should state here that while true croup is usually introduced by a catarrhal stage, as I have sketched it, it is not always so. Now and then, it begins suddenly in a night attack, precisely as does *spasmodic* laryngitis.

The disease is soon at its height, and the phenomena are now most distressing to witness. The cough is more stifled, but not less hoarse than before. Aside from a little mucus that has been churned into foam by the respiratory efforts, there is little expectoration, unless, as is common, there is an accompanying bronchitis. Paroxysms of coughing occur, so severe and prolonged that they seem to threaten instant suffocation. In some instances shreds and even complete cylinders of false membrane are coughed out. Unfortunately the relief that follows is generally transitory, the membrane being soon reproduced. The voice becomes nearly or quite suppressed, and the child makes its wants known partly by signs, partly by an indistinct, interrupted whisper. If it tries to cry, there is little sound in proportion to the effort put forth. In many cases no attempt is made to use the voice in speaking or crying, because it is painful.

The dyspnœa is now extreme, and the whole atten-

tion of the child is absorbed in the effort for breath. Its head is thrown back, for it has found that in that position it can draw the most air through its glottis. Respiration is hurried, for so little air is passed at one inspiration through the narrowed and narrowing air tube that the child *must* breathe rapidly or die at once from apnœa. Both respiratory movements are attended by a peculiar whistling sound, but that of inspiration is the louder and more prolonged. The alæ nasi rise and fall with every breath like the nostrils of an over-driven horse. All the auxiliary, as well as the ordinary, respiratory muscles share in the unequal struggle for air. At every inspiration the larynx is drawn downward towards the sternum, and the intercostal spaces are depressed because the lungs are not expanded. For the same reason the diaphragm is deeply arched upward, and the boundary line between chest and abdomen is marked by a deep groove. The conflict becomes continual, and most painful to witness. The child is extremely restless; it reaches its arms to its mother to be taken, but soon motions to be put down again. It throws itself from side to side, vainly seeking for the "life-giving air." In its frantic efforts to remove the obstruction, it clutches at its throat and tears away the neck coverings. The surface is bedewed with moisture, and the features express the utmost anxiety and distress. You will see nothing in practice that will move your sympathies more than these little sufferers looking appealingly to you for the help that you would most gladly give them if you could.

At times there is some abatement in the urgency of the symptoms, and the over-wearied child falls into an uneasy slumber. But the call for air soon becomes imperative; it awakes with a start, has a fit of coughing, and the conflict is renewed. But though the patient struggles with all its mind and strength, the increasing lividity of its lips, and cheeks, and fingers-tips show how hopeless the struggle is.

If you lay your ear to the thorax at this stage of croup, you find the vesicular murmur diminished in proportion as the amount of air inspired is diminished. You cannot fail to hear the loud laryngeal râles that are transmitted over the whole chest. The percussion note will be normally resonant, unless pneumonitis or somewhat extensive collapse are associated with the croup.

Evidently, symptoms of such urgency as I have been describing cannot go on indefinitely. Relief must come soon, or the child will sink from the violence of its struggles and the need of air.

Not long after lividity of the surface is first noticed, there begin to be signs of carbonic acid poisoning. The cough becomes less, and may even cease entirely; the restlessness abates, and the anxiety of countenance gives place to indifference, because the nerve centres, supplied by impure blood, are no longer alive to the desperate situation. The child *seems* so comfortable, as compared with its condition but a little while since, that the friends may think it has taken a turn for the better. But the growing frequency and feebleness of the pulse, the continued rapidity of breathing, and the increase of bronchial râles, will warn you not to share in a hope that is born of ignorance. Towards the end, the patient usually becomes unconscious, and dies quietly in a state of coma. In some instances there are slight convulsive movements.

I would have you remember that sudden death sometimes occurs before the disease has run the course that I have marked out. This is due, generally at least, to occlusion of the air-tube from a detachment and falling inwards of some portion of false membrane. Probably, death may also be caused, especially if there is bronchitis, by an accumulation of muco-pus below the obstruction.

The duration of croup is subject to considerable variation. Now and then it lays hold with such violence as to carry off a strong child in thirty-six or even twenty-four hours. The majority of fatal cases will run from three to six days. In occasional instances it is less severe—subacute—and runs a tardy but still fatal course of from two to three weeks.

But not all cases are fatal. Sometimes the cough under treatment becomes softer, the breathing less stridulous, the fever less, and the child passes from a condition of extreme danger and distress to one of comfortable convalescence.

In case of recovery, the false membrane becomes softened and broken down, and is then expectorated.

But do not be over-sanguine in your prognosis as long as there is any hoarseness of voice or harshness of breathing, for it may happen to you, as it has to others, to see a marked improvement in symptoms followed by relapse and speedy death.

Croup is not a contagious disease. It is said to be sometimes epidemic, but I think it questionable whether in those instances when it was said to be so prevalent, as in 1805, 1806, and 1807, the real disease was not diphtheria. Whether one attack confers protection against future attacks I do not know, but it seems to be a fact that children very rarely suffer a second time from genuine croup. It is different, you will remember, with simple catarrh of the larynx, which is very prone to recurrence. But in both affections, second are said to be lighter than first attacks. There is another fact that I am quite unable to explain, and that is that male children are much more subject to croup than female. We shall take up the treatment at our next lecture.

ORIGINAL ARTICLES.

PURPURA HÆMORRHAGICA, HÆMATURIA, AND MUCOUS HÆMORRHAGES,

APPARENTLY CAUSED BY THE ADMINISTRATION OF AMMONIUM MURIATE.

BY A. B. ISHAM, M.D.,
OF CINCINNATI, OHIO.

THERE are few facts of medicine better known than that ammonia possesses the power to defibrinate the blood. From this property it would naturally be supposed that hæmorrhages would follow the saturation of the blood with ammonia, but, upon turning to such sources of reference as are readily accessible, there is found only the vague statement that it may occasion scorbutic symptoms, and the general one, that hæmorrhages result from its injection into the blood. Although its salts are used in large doses, and long continued, in a number of affections, as, for instance, embolism, hepatitis, catarrhal pneumonia, bronchitis, neuralgia, and adynamia, we have not yet met with a case recorded where a marked hæmorrhagic condition was produced by it. If the administration of ammonium muriate, in doses regarded as medicinal, may give rise to sequelæ similar to those reported below, it is singular that, with such extensive employment of this agent, no publication has been made of such results. It is more than a matter of passing interest; it is one of importance, since with large and increasing therapeutical application grave mischief may be done with a substance capable of effecting such alterations in the circulating fluid, unless some warning is sounded by those who may happen to meet with

cases where its prolonged or too liberal use as a medicament has seemed responsible for phenomena which may properly be called toxic. A single case by itself is inconclusive, and it is familiar that appearances similar to those observed in the subjoined case occur sometimes in children without appreciable cause. Nevertheless, a report of it is ventured, because there is no recognizable etiological element standing in relation to it, except muriate of ammonia, and because it is considered of moment sufficient to be put forward as a call for analogous cases, in the event that any such have been met with.

E. K., æt. twenty-two months, came under observation January 12, 1882. The child was without fever, was apparently well nourished, had a pulse of slight force and small volume, but presented nothing decidedly abnormal, except fifteen to twenty blebs, filled with dark-colored blood, scattered over the scalp, face, arms, mucous surface of lips, sides of the tongue, hard palate, and gums. These blebs were generally about the size of a pea, a few a little larger, some rounded and of regular outline, while others were flattened, and of irregular shape. There was also hæmaturia and bloody discharges from the bowels. The blood in the urine and feces had been noted the 10th of January, while the skin and mucous membrane hæmorrhagic collections did not attract attention until the evening of the 11th. The child had previously been under treatment from December 19, 1881, for catarrhal pneumonia, and she had been discharged convalescent December 31. During the illness the following was prescribed: ℞. Ammonii muriat, gr. xvj.; Syr. ipecac., ʒij.; Glycerine, ʒvj.; Aq. dist., ℥j.; M. Sig. One teaspoonful every three hours.

At the date of discharge, the above prescription was ordered discontinued, but, upon inquiry, it was learned that it had been continued ever since, because the mother thought it strengthened the child, and that, if something was not given, the disease might return again, as a little cough was noticed occasionally. The solution was ordered stopped, and tincture of chloride of iron was substituted, under which, in a few days, the hæmorrhages were arrested, and the purpura hæmorrhagica disappeared.

WARM BATHS IN CATARRHAL PNEUMONIA.

BY E. STUVER, B.Sc., M.D.,
OF RAWLINS, WYOMING TERRITORY.

I REPORT the following case for two reasons: First, because the treatment of acute inflammatory affections of the organs of the chest by means of warm or tepid baths, is either entirely ignored, or merely alluded to by standard authorities; second, because the symptoms of the case were of such gravity as almost entirely to preclude any hope of recovery.

As a preface to the history of the case, I will state that we are located in a comparatively dry and equable climate, at an altitude of about 7000 feet above sea level, and that although cases of pneumonia occasionally occur in the late autumn, winter, and spring months, it is not, at least in my experience, a disease of great frequency.

I was called to see Willie, æt. twenty months, at 2.30 P.M., December 1, 1881, and obtained the following history: Has always been very robust, and enjoyed remarkably good health, until a week or so ago, when he contracted a severe "cold," accompanied by a severe and painful cough; has been losing flesh quite rapidly for several days; appetite is poor—he takes nothing but milk; bowels quite regular; during the greater part of the time for two or three days past he has been lying in a semi-unconscious state, except when roused by pain of coughing. Following conditions were noted: Cheeks slightly flushed over a circumscribed space, but otherwise of a pallid, leaden hue; expression pinched and anxious; pupils normal; tongue thickly coated with a yellowish-brown fur; abdomen somewhat distended, but not painful on pressure; coughing is painful, and causes him to cry, but it is a cry devoid of tears. The characteristic expiratory moan is present at intervals. Auscultation revealed bronchial respiration, with subcrepitant and indistinct crepitant râles over the greater portion of the chest, but most clearly marked on the left side. Temperature (Kew), 106⅘°; pulse, 150; respiration, 64. Gave a mild saline aperient, and the following ℞.: Quiniæ sulphatis, grs. xvi.; Spts. vini gallici, fʒii.; M. Sig. one-half drachm in water every two hours.

2d.—8 A.M.: Temperature, 104°; pulse, 130; respiration, 60. 4 P.M.: Temperature, 103⅖°; pulse, 150; respiration, 65. This morning gave three grains quinia from 8 to 9 o'clock, and continued the preparation above indicated during the day.

3d.—8 A.M.: Temperature, 105°; pulse, 150; respiration, 70. 1 P.M.: Temperature, 104⅕°; pulse, 150; respiration, 65. 7 P.M.: Temperature, 105°; pulse, 150; respiration, 65. Pursued same treatment as yesterday, and, in addition, gave one grain ammonium carbonate every hour, until four doses were taken, and then the same amount every two hours during the day; also, Potassium acetate, grs. ii., and Spts. etheris nitrosi, ♏x. Sig. every four hours, increasing the quantity of brandy. Notwithstanding the active stimulating and antipyretic treatment above described, the symptoms were increasing in gravity, the respiration irregular and labored, the pulse small and weak, and the countenance pallid and anxious.

At 7 P.M. it was decided to employ the warm bath. The patient was stripped naked, and in order to avoid frightening him, placed in a blanket over the bath-tub and thus lowered into the water, which had a temperature of 100° Fahr., at the beginning, but was gradually lowered several degrees. Over the upper portion of the chest, which was not entirely submerged, water from the bath-tub was thrown or douched quite rapidly by the hands for about fifteen minutes. He was then removed, the skin thoroughly dried, and friction, just sufficient to produce a nice glow, kept up for several minutes; he was then carefully enveloped in blankets and returned to bed. The temperature fifteen minutes after removal from the bath was 103⅘°; both the pulse and respiration were fuller, stronger, and less frequent. The bath had a general tranquillizing effect, and he slept better than usual for some time

afterwards. Just before entering and after coming out of the bath, about two drachms of the best brandy were administered, in order to obviate any depressing effects. The same precautions were adopted in all the subsequent baths.

4th.—8.30 A.M.: Temperature, 104⅕°; pulse, 130; respiration, 55. Bath of 100°, cooled to 94,° being employed for fifteen minutes, temperature fifteen minutes after coming out was 100°. 1 P.M.: Temperature, 104⅕°; pulse, 135; respiration, 70. 7 P.M.: Temperature, 102⅕°; pulse, 130; respiration, 56. No large doses of quinia given this morning; other medicines continued as before. Cough not so painful, and breathing less labored this evening.

5th.—9 A.M.: Temperature, 103⅖°; pulse, 130; respiration, 60. After being in a bath of 103°, cooled to 97°, for fifteen minutes, temperature, 102⅖°; respiration, 50 and fuller. 5 P.M.: Temperature, 101⅘°; pulse, 120; respiration, 55. Gave 3½ grains quinia this morning; usual medication continued.

6th.—8.30 A.M.: Temperature, 104°; pulse, 140; respiration, 65. After bath of 102°, cooled to 96°, for fifteen minutes, temperature, 102°; pulse, 140; respiration, 55. 4.30 P.M.: Temperature, 101⅗°; pulse, 128; respiration, 55. After the bath to-day, he lay quiet all forenoon, but in the afternoon tossed and moaned considerably. Gave the following: ℞. Ammonii carbonatis, ℈i.; Pulv. acaciæ, ℥ss.; Tr. digitalis, gtt. xx.; Aquæ, f℥ii. M. Sig. one drachm every two hours.

7th.—8 A.M.: Temperature, 101⅘°; pulse, 120; respiration, 45. 5 P.M.: Temperature, 101⅖°. Considerable general improvement is noticeable to-day: bowels, which had been constipated for several days, moved both late yesterday evening and this morning; tongue cleaned off nicely; color is returning to face, which has a more natural expression; appetite much improved, enabling him to take considerable nourishment during the day. Has been fretful and irritable all day.

8th.—8 A.M.: Temperature, 98°; pulse, 112; respiration, 50. 4 P.M.: Temperature, 99; pulse, 112; respiration, 42. Continued the ammonium carb. and tr. digitalis preparation, but substituted beef, wine, and iron for the brandy and quinia. To-day follicular stomatitis developed on the tongue and inside of the gums. This yielded in a few days to a mixture of borax in glycerine.

There was retention of urine for about twenty-four hours, from December 8th to 9th, relieved by spirits etheris nitrosi and warm applications to the bladder. The child was quite fretful for some time, and convalescence progressed tardily. This was largely due, however, to bad hygienic surroundings and want of properly prepared food, and careful attention. Notwithstanding these impediments, he finally made a good recovery.

Although the data derived from a single case do not justify us in drawing general conclusions, yet the effects were so invariably gratifying that we are led to hope warm or tepid baths will be much more generally adopted, and be the means of alleviating suffering and saving life.

HOSPITAL NOTES.

METROPOLITAN THROAT HOSPITAL.

(Service of Dr. Clinton Wagner.)

A RARE FORM OF NASAL TUMOR—REMOVED BY OPERATION.

(Reported by Dr. Guy F. Whiting.)

Mrs. E. R., aged twenty-three, presented herself at the Metropolitan Throat Hospital, August 20, 1881, complaining of having suffered during the last two months from frequent and severe hæmorrhages from her left nostril. It was noticed that she breathed with difficulty and with her mouth opened, and upon being questioned she stated that she had not been able to breathe with ease for over a month, and that it had become gradually worse, so that for the last few weeks she was compelled to breathe through her mouth. She was very weak and anæmic, and it was evident that there had been a great drain upon her system. Her nose presented rather a strange appearance, the lower part being twice its natural size, and protruding about two lines out of its left anterior naris, and entirely filling it, was a tumor covered with dried and coagulated blood. Since she had only been aware of the presence of this tumor for the last four weeks, it must have been of very rapid growth. The cartilages of the left ala had been pushed outward from their normal position, and presented a protuberance the size of an English walnut. The septum, being subjected to the same pressure as the left ala, had been forced so far to the right that it nearly entirely occluded the right nostril. In fact there remained so little breathing space that the patient was compelled, as stated above, to resort to the baneful practice of mouth-breathing. An examination, made to ascertain the character and attachment of the growth, brought on quite a severe hæmorrhage, which was checked with difficulty. The tumor was found to be attached to the middle turbinated bone. A rhinoscopic examination showed that neither the vault of the pharynx nor posterior nares were involved. It had not the softness or compressibility of a mucoid polypus, but felt under the probe more firm and resisting. Portions of the growth that were brought into view were of a dark bluish color and very vascular. Several small erosions of the mucous membrane were to be seen upon its surface, and bled readily and freely when touched with the probe. As above stated, the growth was exceedingly vascular, and we are of the opinion that it was a pulsating tumor.

On August 22, the tumor, measuring an inch and a quarter in diameter, was removed with the snare. The operation was followed by a profuse hæmorrhage, almost producing syncope, and was checked only by tamponing the nostril. Fearing that there might be a return of the hæmorrhage, directions were given that the tampon should not be removed for twenty-four hours. In a few days the nose resumed its natural size and shape, and the patient was discharged from the hospital with orders to report from time to time. She was examined several times during the following two months, and, as there was no evidence of the growth returning and no traces of it remaining, she was finally discharged.

The tumor being examined by Dr. Heitzman under the microscope, presented some very interesting features. The main mass consists of a delicate reticulum of fibrous connective tissue with nuclei at the points of intersection. The meshes of this reticulum contain, besides delicate fibres, a homogeneous, jelly-like, basic substance, and imbedded in this a moderate quantity of globular protoplasmic bodies. The reticulum is fully supplied with capilliary blood vessels.

This structure is characteristic of tumors of the myxomatous variety. Towards the periphery the myxomatous portion of the tumour is abundantly infiltrated with globular protoplasmic bodies, especially is this the case in the neighborhood of the above-mentioned ulcerations, and is a feature indicating rapid growth.

Towards the base of the tumor large portions are marked by a higher degree of consistency, and are built up of a relatively coarse reticulum of connective tissue fibres, or bundles of fibres, enclosing comparatively small spaces of a homogeneous basic substance, and a small number of protoplasmic bodies. These features are characteristic of those tumors termed myxo-fibroma, and represent the transition stage of the myxoma into fibroma. Large portions of the tumor exhibit a structure consisting of a frame of connective tissue enclosing large and regularly distributed spaces, which are filled with blood. This framework represents the walls of cavernous spaces, spaces like in structure to those of the cavernous bodies of the penis. The inner surface of the walls of these spaces are lined with an extremely delicate endothelium. This portion of the tumor must be classed under the head of angioma, and belongs to the cavernous variety.

Thus we see that the growth is of a very complicated structure, one portion being a myxoma, another a myxo-fibroma, and still another an angioma of the cavernous variety.

Remarks.—There are, as far as we have been able to learn, only two recorded cases of nasal tumors resembling the above. One is mentioned by Virchow, as having been reported by Beauchêne. The other case is reported by Dr. Clinton Wagner, in the Archives of Clinical Surgery, January, 1877. The growth in the latter case was attached to the septum amd was removed with the knife. The operation as in the present case was followed by severe hæmorrhage.

MEDICAL PROGRESS.

The Bacillus of Tuberculosis. — Dr. Koch, member of the Imperial Board of Health, demonstrated, on March 24, in an exhaustive lecture accompanied by illustrations, and delivered before the Physiological Society, that tuberculosis (miliary tuberculosis, cheesy pneumonia, etc.) is, beyond all doubt and peradventure, a bacteria disease (*Bakterienkrankheit*), caused by a bacillus resembling the *bacillus lepra*.

1. By a certain method of coloring the preparations (methylene violet and resuvin), Dr. Koch was able, in every instance, to demonstrate the characteristic and always motionless, bacilli, especially in places where the process was more recent, and more sparingly where the process was of longer standing, as in the giant cells.

2. Dr. Koch succeeded in cultivating this bacillus outside of the animal body, and free from all admixture of foreign animal material, on a specially prepared blood serum gelatin. The bacillus grows very slowly, thrives only at a temperature of between 30° and 42°, and also differs essentially in other respects from other pathogenic bacilli and micrococci, cultivated in a pure state.

3. With these bacilli, cultivated outside of the organism for 200 days, from flask to flask, Dr. Koch succeeded in a series of experiments conducted with all conceivable precautions, in inoculating tuberculosis (and the pearl-disease of cattle, which shows the same bacilli) in a characteristic and decisive manner. Inoculation in different places, as well as injections into the circulation, produced acute miliary tuberculosis, and, after a longer interval, cheesy processes. He even succeeded, by means of these inoculations, in rendering tuberculous, in a comparatively short time, animals which otherwise enjoy immunity from the affection, such as dogs and rats.—*Deutsche Med. Zeit.*, March 30, 1882.

Ankylostoma in France and Miners' Disease.—M. E. Perroncito examined three cases of miners' disease occurring in the practice of Dr. Rieumbault at Sainte Etienne and found in the dejecta large numbers of eggs of the ankylostoma, thus explaining the intense anæmia from which the patients suffered and proving that the parasite is not confined to the St. Gothard region, where the author discovered it, but is to be found in other parts of France.—*Journ. de Méd. de Paris*, Feb. 4, 1882.

Laryngeal Electrization.—Can the nerves and muscles of the human larynx be excited directly by electrical stimulation applied through the skin? To this question Rossbach has endeavored to obtain an answer, and his experiments enable him, he believes, to give an affirmative reply. An individual was selected, tolerant of laryngoscopic examination, and a knob-shaped moist electrode was placed midway between the larynx and the sternum, in front of the anterior edge of the sterno-mastoid, being pressed as deeply in as could be without causing much pain. The other electrode was placed in some indifferent situation on the back of the hand. With this arrangement, whenever an opening or closing shock was sent between the poles, on the side on which the electrode was placed in the neck a distinct contraction could be observed. The vocal cord moved inwards in its whole extent, together with the arytenoid cartilage. The closure contraction was the strongest when the cathode, the opening contraction when the anode, was placed on the neck. Immediately after the stimulation a movement of swallowing occurred, which rendered further observation inpossible. If the stimulation was made while a note was being uttered, the effect was to increase the pitch without interrupting the sound. The effect is ascribed to stimulation of the recurrent laryngeal nerve. Experiments with faradization yielded the following conclusions. The passage of a strong current transversely through the larynx, an electrode being placed on each side of the thyroid cartilage, had no effect on the vocal cords or on the arytenoid cartilages. The free upper edge of the epiglottis was drawn forwards and its lower part backwards. The aryteno-epiglottidean folds were moved inwards, together with the false vocal cords. If one electrode was placed on the side of the larynx and the other on an independent place, the effect was the same, but was confined to one side. A slight movement of the vocal cord was produced by an attempt to faradize the recurrent laryngeal nerve of one side, and the effect was still more marked if an electrode was placed over each recurrent laryngeal, a distinct tremor of the arytenoid cartilages being produced. Hence Rossbach concludes that, in addition to the reflex effect of a painful cutaneous stimulation and to the effect on the larynx of stimulation of the external muscles, electricity applied outside the larynx can directly stimulate, feebly but unquestionably, the laryngeal nerves.—*Lancet*, March 4, 1882.

Acute Cardiac Affections in Old Age.—M. Ch. Féré believes, from a careful study of this subject, that acute affections of the heart, occurring in old age, are rarely due either to acute or sub-acute rheumatism, and that even though acute rheumatism may occur at this period of life, it rarely implicates the heart. On the other hand, he thinks that, although pulmonary affections may produce pericarditis, cardiac lesions in the old can almost invariably be traced to some renal affection.—*Revue de Méd.*, March 10, 1882.

SEPARATION OF THE CRANIAL BONES IN MENINGITIS.—M. PARROT records (*Rev. de Méd.*, February, 1882) three cases of meningitis in children (occurring in his clinique at the Hôpital des Enfants Assistés in Paris), in which, post-mortem, the bones of the skull were found separated along their sutures, apparently by the increase in size of the diseased brain. The cases are briefly as follows:—*Case* 1: A boy, aged two years and nine months, was admitted for diarrhœa. He had also some slight pulmonary trouble, with elevation of temperature. On the day following his admission he had some slight rigidity of limbs, with intermitting twitchings. On the second day epileptiform convulsions set in; *tache cérébrale* was manifest. Death ensued on the third day after admission. At the post-mortem examination, on removing the scalp it was seen that the bones of the calvaria were separated from each other, especially along the coronal, sagittal, and frontal sutures, and the intervening space was filled with a blood-stained material. The extent of the separation reached as much as three millimetres. *Case* 2: A boy, aged two years, was admitted with marks of congenital syphilis and diarrhœa. He died six days later of tubercular meningitis. At the autopsy, the parietal and frontal bones were found separated along the coronal suture to the extent of two millimetres, the interval being filled with a blood-stained material; to a less extent, the sagittal and lambdoid sutures were separated. The ventricles contained a considerable quantity of fluid, and the brain-substance was much softened; tubercles were abundant. *Case* 3: A boy, aged three years, was under treatment for conjunctivitis; he recovered from this. Shortly afterwards, tubercular meningitis supervened, and he died. In this case the bones were separated three millimetres, the interval being filled with blood. The surface of the convolutions, which were much flattened, was covered with a thick layer of puriform lymph. There was no fluid in the ventricles, which appeared normal. (We have only mentioned the cerebral lesions in these cases for the sake of brevity.) M. Parrot regards this lesion as due to the pressure of the diseased brain, which, in consequence of the inflammatory changes, more or less quickly increases in size. This increase in size, about which there may be differences of opinion, he thinks is proved, first, by the flattening of the convolutions, but chiefly by the weight. In the preceding cases the brain weighed from 78 to 110 grammes more than the average for the corresponding age in health. This increase of weight may depend on several causes. One of them is the inflammatory or tubercular infiltration which existed in all these cases, as well as hydrocephalus in one of them. A condition which is almost essential for the development of such displacements is an acute onset of the encephalo-meningeal lesions; for, as is well known, if the changes occur slowly, the cranial cavity adapts itself to the increasing volume. The age of these patients rendered it more than probable that no membrane existed at the sutures; but at the same time, and for the same reason, the sutures were less solid than at a more advanced period of life. M. Parrot, on looking back at the cases, could not point out that any signs had existed during life indicative of such a condition. In all the cases the lambdoid suture was less affected than those situated in the forepart of the skull, while the basal sutures were quite unaffected. This is explained on physiological grounds, viz., that the brain tends to increase in an antero-superior direction more than in any other, both in health and disease.—*Med. Times and Gaz.*, March 18, 1882.

EXTIRPATION OF THE KIDNEY.—PROF. ROSENBACH reports a case of pyelitis and calculus of the right kidney, with several perinephritic abscesses, in a man aged forty-two years, in which he removed the kidney, the incision being made at the outer border of the erector spinæ muscles from the border of the last rib to the crest of the ilium. The wound was treated with iodoform and the patient made a speedy recovery.—*Berliner klin. Woch.*, Jan. 30, 1882.

RETRO-PHARYNGEAL ABSCESS AND SCARLET FEVER.—DR. LEWANDOWSKY, in recording two cases of retro-pharyngeal abscess after scarlet fever, in the *Berliner Klinische Wochenschrift*, No. 8, draws attention to the comparative rarity of this complication of scarlet fever, although inflammatory conditions of contiguous or neighboring parts of the neck are so very common. Dr. Schmitz did not find one single case in the St. Petersburg Children's Hospital among 450 cases of scarlet fever. Dr. Bokai, on the other hand, gives seven cases as occurring among 664 cases of scarlet fever, being in the proportion of 7 out of 144 cases of retro-pharyngeal abscess which he had collected together. *Case* 1: A child, one year old, contracted the fever (two other children had died of the malignant form), apparently not very severely. There was early some inflammation about the posterior nares, as evidenced by a copious muco-purulent discharge from, and swelling about the base of, the nose. Fauces not unduly inflamed or affected. About three weeks after the commencement of the fever, convalescence being slow and variable, but without any symptoms specially pointing to the retro-pharynx, a swelling was noticed on the left side of the median line, with distinct fluctuation. An incision was made into it, and about half an ounce of thin yellow pus let out. The child then rapidly recovered. *Case* 2: A boy, aged seven months, sickened with a mild attack of scarlet fever. The catarrhal symptoms in the fauces were slight; but there was a copious discharge of muco-purulent material from the nares. Convalescence was proceeding slowly, when (on the tenth day) a peculiar snorting respiration came on. On examining the fauces, a swelling was seen, which fluctuated on pressure. An incision was made into it, and a tablespoonful of good yellow matter was evacuated. The child soon recovered completely. In some remarks, the author points out that it is especially in young infants that this form of abscess mostly occurs. They were on one side of the fauces only; their development was slow, and subacute in form: and thus there were none of the symptoms of suffocation and difficulty in swallowing which occur in more acute cases. On this account, perhaps, they may occasionally be overlooked. Mere inspection of the fauces does not suffice for their recognition; the finger is almost always necessary. Prognosis is not unfavorable; an incision is the proper treatment to adopt.—*Med. Times and Gaz.*, March 18, 1882.

ARSENICAL POISONING.—Dr. N. POPOFF, after a series of experiments in Mierrzejewski's laboratory (*St. Petersburg. Med. Woch.*, No. 33, 1881), comes to the following conclusions respecting arsenical poisoning: 1. That arsenic may, within a few hours after its application, cause an unmistakable alteration of the spinal cord, which may manifest itself either as myelitis centralis acuta or poliomyelitis acuta; 2. That in more chronic cases an inflammation may result, not only of the gray substance, but of the white also, constituting a diffuse myelitis; 3. The peripheral nervous system is unaffected in those cases in which death occurs within three months after the reception of the poison; 4. That the paralyses from arsenic poisoning are of central origin. He has had similar results with lead, and believes that in long-continued metallic poisoning, alterations in the spinal cord are very likely to occur.—*London Med. Record*, March 15, 1882.

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SATURDAY, APRIL 29, 1882.

THE BACILLUS OF TUBERCULOSIS.

THE germ theory has received a new and powerful impetus by the recent discovery by KOCH of the specific parasite of tubercle. The remarkable observations leading to its detection, and the experiments showing its infective property, were announced by Dr. Koch in a paper read before the Berlin Physiological Society, and which appeared in the *Berliner klinische Wochenschrift*, April 10, 1882.

This is not the first announcement of discovery, showing the infective nature of tubercle; since the suggestive but rather abortive experiments of Villemin, there have been numerous papers setting forth some supposed, and a few actual, facts throwing light on the self-propagating power of tuberculous matter. There have been announcements, indeed, of the discovery of the specific germ. Schüller had found in the tubercular material of strumous joint affections, a peculiar micrococcus; Klebs had demonstrated in tubercle a bacillus which he held to be its specific germ; and Aufrecht had seen in tubercle-mass a minute organism of rods and granules, which to him possessed the same significance. But none of these observers, had not only demonstrated the form, position, and characteristics of the new parasite, but had cultivated it in special culture fluids, and, what is still more conclusive, produced tuberculosis by the inoculation or implantation of the supposed infecting parasite. Such are the remarkable achievements of Koch.

The new parasite, as described by the discoverer in the paper above mentioned, is a very minute, rod-shaped body, in its greatest length having dimensions one-half to one-fourth the diameter of the red blood globule. It resembles strongly in appearance and shape the *bacillus lepræ*. The parasites are found in greatest abundance wherever the tubercle process is going on with the highest activity, developing at the borders of the tubercle-granule and in the so-called giant-cells. Koch gives a number of cases of tubercular disease of various organs, in which he found the parasite maintaining a vigorous but motionless existence where the formation of tubercle was going on most actively. By a carefully devised method of staining, Koch is able to separate the parasite from the adjacent material. In his paper he gives full details of the process. He has, also, happily succeeded in his culture experiments. In a blood-serum gelatine fluid, maintained carefully at a temperature between 86° and 108° Fahr., at which only they will thrive, he was able to make them grow in the slow manner peculiar to them.

Now comes the crucial experiments. If this parasite be the specific infective material, it must, if the culture methods are not faulty, develop tuberculosis in those animals susceptible to the action, and proper hosts of tubercle. Koch carefully cultivated the parasites in the culture fluid kept in flasks at the proper temperature for several months, and then inoculated various animals, who without exception became tuberculous. Animals not readily susceptible to the action of tubercular matter in the ordinary state, as dogs and rats, were affected by the parasite actively, and suffered from tubercular disease in its typical manifestations. The infectious disease—*perlsucht*, in animals, corresponding to tuberculosis in man, it is interesting to note, contains the same parasite, capable of the same mode of cultivation, and producing the same morbid state by inoculation.

The evidence thus seems conclusive; it only remains to develop, from the cultivated parasite, tuberculosis in man to complete the cycle of evidence, and to establish Koch's discovery amongst the great facts of medical science. Prof. Tyndall maintains the genuineness of these observations, and is fully alive to their transcendent importance. He calls attention to them in a letter to the *London Times*.

No one can fail to be profoundly impressed with the painstaking skill of the discoverer, and the far-reaching consequences of the discovery. In the facts laid before our readers, may be the solution of the problem so long regarded as insoluble—the cure of tuberculosis. If Pasteur's culture experiments have led to the discovery of a method by which the poison of splenic fever is rendered harmless, and the disease prevented by the timely inoculation of the modified virus, may we not hope that the time is not distant when the ravages of consumption will be prevented by the inoculation of a modified bacillus?

The medical profession of the whole civilized world will now await with the keenest interest the developments which may be expected from the further study of the *bacillus tuberculosis*.

GUNSHOT WOUNDS OF THE PERITONEUM.

GUNSHOT wounds of the peritoneum are almost as certainly fatal as the hangman's rope. They kill over ninety per cent. In our late war Dr. Otis gives the results of 3,717 cases, with a mortality of 87.2 per cent.; but in 2,599 of these cases, with inexactly known visceral injuries, the mortality was 92.2 per cent. They are the most fatal of all gunshot wounds. Even bullets through the brain are less fatal than those passing through the belly. And what hitherto has been our treatment? Postural treatment, which rarely did much good even if successfully maintained, opium, liquid diet—and death, after a period barely long enough to make a will. Surely the time has come for a change, the uncertain perils of which can scarce equal those that certainly beset our present method.

We are led to these remarks by the perusal of an excellent paper presented to the American Medical Association last year, by Dr. Hunter McGuire, on Operative Interference in Gunshot Wounds of the Peritoneum. It is a vigorous onslaught upon our past *laisser aller* methods, and a strong argument in favor of discreet but decided interference to prevent death. It is precisely in the line of our editorial of January 21, on Abdominal Surgery, and is one of a number of what we deem reasonable endeavors to alter a pernicious, though well-meaning, conservatism. The suggestion of Legouest that the surgeon should interfere actively, has been ably seconded in our own country, in 1873 by McGuire, in 1876 by Dugas and Otis, and now again by McGuire and Sims.

The question of the diagnosis of visceral lesion, especially with a small external wound, is not easy.

The old idea of Travers and Bell, strangely countenanced in our own day by so good a surgeon as Mr. Erichsen, that the equable pressure of the abdominal contents is so effectual in preventing escape of feces, is now pretty fully exploded. Common sense, as Dr. McGuire says, teaches us that the fecal matter will follow the path of least resistance afforded by the opening, and common experience proves it to be so.

That a deep stab or bayonet thrust, or even a gunshot wound of the peritoneal cavity may occur without wounding of the viscera is certain though rare. Dr. McGuire gives four illustrations of the last. But in the vast majority of such wounds unquestionably the viscera are injured. What viscus is wounded is not a matter of indifference either as to prognosis or treatment. Thus, taking Otis's statistics, shot wounds of the liver and kidney are the least dangerous (63.5 and 66.2 per cent.), while those of the spleen are most so (93.1 per cent.), except wounds of the suprarenal capsule, of which a solitary fatal case is recorded. Recovery after wounds of the large intestine are quite numerous, while, *per contra*, those following wounds of the solid viscera and the small intestine, with extravasation of their contents, even in our late gigantic war, Otis says are so few that "the absolutely authenticated examples can be counted on the fingers."

The escape of feces is of course sufficient evidence of penetration; but a small external wound will scarcely allow of such evidence, while bloody stools, localized pain, etc., are not sufficiently positive indications upon which to base active interference. Jobert asserts that sudden meteorism is pathognomonic of visceral lesion. While we can scarcely admit his assertion without modification, it is no doubt true to a very large extent. Dr. McGuire adds to this the presence or absence of shock as an equally valuable symptom; but, Otis points out that this is often found in severe contusions without rupture, and also that we must endeavor to discriminate true shock from the collapse which attends severe internal bleeding. Another sign on which we decidedly need more light is the question of the temperature. Le Gros Clark points out the undoubted fact that it is depressed both in contusion and in visceral lesions, but has not been able to verify the assertion that the fall of temperature and the shock are proportionate to the proximity of the lesion to the stomach.

Dugas proposes to lay open the abdomen, ligate the vessels, examine the whole length of the alimentary canal if necessary, make of the ragged wounds (both parietal and visceral) clean incised wounds by trimming, and close them by animal sutures after removing all foreign substances. McGuire ably advocates the necessity of thorough drainage. This he would attain either by the wound if in a suitable position, or if not then by drainage, either through the recto-vaginal or the recto-vesical fold—a procedure readily adopted before closing the abdominal incision.

With careful antiseptic precautions and such excellent surgery as we believe the above to be, gunshot wounds of the peritoneum involving the viscera, while always dangerous and always sure to claim a large percentage of their victims, will yield many notable triumphs to the surgeon bold enough to claim them.

THE LAW OF THE COMMITMENT OF THE INSANE.

THE law of Pennsylvania provides that insane persons may be placed in a hospital for the insane by friends or relatives, never without the certificate

of two or more reputable physicians, after a personal examination made within one week of the date thereof; and this to be duly acknowledged and sworn to before some magistrate or judicial officer, who shall certify to the genuineness of the signatures, and to the respectability of the signers.

The law is loosely drawn; the practice under it yet looser. As to admissions, the doctors certifying may live in Oregon or China, come here with a patient, sign before a magistrate, and so put away the insane man. Nor, as the law reads, need the magistrate, any more than the doctor, be a citizen of this State. Probably—nay, certainly—the courts would decide that he was meant to be, but as surely this is not so stated in the text of this amazing piece of legislative wisdom.

Again, nothing in the law forbids two medical officers of an asylum to sign, etc., and so to commit. We have never known this power to be used, but it exists.

Admissions to asylums are also brought about in another way: A woman who is drinking or taking opium, or who is in the milder stages of melancholia, is persuaded by friends to go of her own will to an asylum, or is told that she will otherwise be sent as insane. Once there, the medical officers soon see fit to insist on certificates from without, and these are apt to be given with the more readiness when the patient has already been consigned to a place which marks all its inmates with the label—"Insane."

The part of the magistrate in committals is no less a farce. The signature must be real, the signer respectable. In a long and large experience, we have never known a magistrate to offer an objection to any person who said he was a doctor, and was willing to sign and pay. You need but to be a doctor of yesterday's making in Pennsylvania, be able to write, and be respectable, in order to decide if this or that poor fellow shall be shut up for treatment. Lastly, under our law, the certificate runs without limit as to time, whereas in England a period is set, after which it expires; whilst there, also, every admission to homes or private hospitals must be communicated to the Lunacy Officers of the Crown within a week.

As at present constituted, the State Board of Charities is limited to inspections of correctional, reformatory, and charitable institutions. Of course, this does not include private hospitals or homes, but whatever changes are made in our law of insanity, should cover all places in which the insane may be placed, and should hold these, be they small or large, to as strict account as the Board of Charities holds the great hospitals to, which it is charged to visit at the too-frequent interval of a year.

It is not well known by what experts the present law was drawn. Clearly, they were men with a large confidence in human nature, since, although they surrounded the committal of the insane with so many safeguards, they did not think it needful to exact any penalty for failure to comply with the statute. You must not do this or that! If I disobey, what will happen to me?—This is an unequalled charade. Answer, nothing!

One feature of English asylums we greatly need. It is the home for the convalescent, which is to be found associated with Bethlem, some of the great borough hospitals, and many of the great private asylums. Some years ago an effort was made to arouse the managers and superintendent of the Pennsylvania Hospital for the Insane to the need of such an adjunct. It failed utterly. And last year, the managers of the Friends' Hospital, at Frankford, were in like manner appealed to. Dr. Hall, the medical officer, was highly in favor of the step, but, although some money was offered from outside of the Board to assist the scheme, it met with no better fate than elsewhere. The value of such a home at Atlantic City would be very great. There is a noble chance to be had for not a very large expenditure.

It is not easy to see why there are no physicians, as a rule, in hospital boards, which are made up of men of high character, good aims, and total want of training. It would be an interesting thing to let a man trained to hospital inspection take a class of managers through a hospital. The visit is unexpected, the "head doctor" out; every foot of that building is seen, every attendant, and full notes are made, and a definite report. Really, a doctor might be of some value on such a board. Perhaps, three or four would not be out of place; and what the attendants in some hospitals disrespectfully call "dress parade," that is, "managers' day," might no more be heard of.

A serious, brief book, of numbered notes for hospital inspection ought to be a useful thing for visiting managers. It should resemble the little memorandum book carried during the war by inspectors.

FOUL AIR IN OUR PRIVATE SCHOOLS.

Our best families surely do not want to emulate the Indian mothers on the banks of the Ganges by a wholesale destruction of their daughters. Yet they are unwittingly doing so in sending them to many of the best-known and most highly esteemed private schools.

Most of these schools are held in our ordinary city houses, without the slightest provision for ventilation, or, in fact, any hygienic supervision whatever. The rooms, though large for a private family, are

necessarily overcrowded by the number of pupils in the class. Ventilating shafts, or even ordinary ventilators, are rarely provided; and to ventilate by opening windows in winter, is to expose the nearer girls to pneumonia, to save the further ones from suffocation. Their bed-rooms are, if possible, worse than the recitation-rooms, for they are more closely shut, and the continuous occupancy is far longer.

Few schools can have buildings specifically designed for the purpose, so we must submit to the facts as we find them; but every class- or sleeping-room should have at each window a board with two of the familiar curved tin tubes, which force the wind currents upward, and distribute them through the room. They are provided with dampers, also, to regulate the amount of air passing through them.

In buildings, however, provided for very large schools, we have a right to expect better things. Expense that a private teacher cannot incur, becomes in such a school a duty. Provisions that may be neglected in a school of fifty, without too serious damage to health, in a school of five hundred are not only necessities, but the neglect to provide them becomes almost criminal.

In consequence of asserted faults in the ventilation of the Packer Collegiate Institute, in Brooklyn, one of the most favorably known of our large girls' schools, the *Sanitary Engineer* recently caused a thorough examination to be made of the atmosphere the pupils lived in, and with the most startling results. The amount of impurities present "was found by chemical analysis to be greater than in a crowded theatre or in smoking cars, and three times as great as in the public schools of Boston and Philadelphia." In two class-rooms, the amount of carbonic acid present in the air was twice as great as that in the pit of two of the worst-ventilated London theatres near the close of the performance. That such a state of affairs exists, is not only disgraceful, but in the highest degree alarming to parents and physicians. It is hardly fair to say *ex uno disce omnes*. But every parent sending a girl to any similar school should look into the matter, and every physician called to treat a school-girl—or boy either, for that matter, though their more violent and more frequent outdoor sports to a great extent neutralize such an evil—should inquire carefully into the facts of school-life and habits.

If, following up the exposure of the facts by the *Sanitary Engineer*, the Trustees of Packer Institute do not instantly remedy the evil, the suggestion of the *New York Times*, that it be indicted as a nuisance and closed, would be in order.

That our public-school directors may also learn a lesson from this case, is evident. Many of them are doctors. We call on them to heed the warning. In spite of the comparatively favorable results their buildings show, they are not yet hygienic paradises.

A FABLE.

"More true than strange. We ever may believe
These antique fables."

SOME covetous and unworthy Fowls for a long time observed with jealousy the ease with which a neighboring flock of Ducks secured their daily sustenance from the gullible denizens of a well-stocked Fish-pond, and contrasted it with their own toilsome and early matutinal efforts in pursuit of the elusive Worm. Knowing the not altogether undeserved reputation of the Ducks for want of sagacity, the Fowls resolved, without previously ascertaining the opinion of the anserine community, to amalgamate themselves therewith, and, profiting by the association, craftily to appropriate a portion of their scaly but nutritious aliment. The Ducks, however, with unsuspected acuteness, withdrew the customary skin from before their eyes, and at once perceived the significance of these artful approaches. Having been long accustomed to move in a separate social circle, they resented the informality and cupidity of the attempt, and, availing themselves of their abundant oleaginous secretion to slip from between the claws of their pretended friends, retreated to their native element, from which they reviled the intruders with loud cries of "quack," in derision of the endeavor of the latter to assume their own well-known characteristics. Realizing the uselessness of their venture, and weary of futile dalliance, the disappointed Fowls sought refuge and consolation in the pleasant Fields which they had forsaken, but found to their surprise that their movements had been watched by their more honorable and less avaricious companions, who sternly refused to allow their admission to the most humid and best populated districts of their former Scratching-ground. Driven to search in sandy corners for the sinuous and vermicular Annelid, who became attractive in proportion to his infrequency, the sorely-punished and deeply-sorrowing Fowls comprehended that, had they been content to work as Nature had intended, they would have escaped the contempt of their equals as well as the obloquy of their inferiors.

For a modern illustration of the general principle inculcated by the hoary sage from whose writings we have culled the foregoing gem of wisdom, we respectfully refer the reader to page 478.

THE New York *Medical Record* says, "we are receiving from influential men in every part of the country the heartiest endorsements of the course of the *Record* in its advocacy of freedom in consultations."

We trust that our contemporary will publish the

names of these influential gentlemen, that the profession may know who they are, and that they may have all the reputation which should come from this exhibition of the courage of their convictions; their letters, too, might prove interesting reading.

WE are gratified to learn that the Philadelphia Nurse Directory will be open on May 15th. Miss Emily Thomas will be in charge as secretary, the office being at the College of Physicians, N. E. corner 13th and Locust Streets. A circular has been issued to physicians requesting them to send in at once lists of the nurses they can recommend, to induce their nurses to register, and especially to procure all their nurses, after May 15th, through the Directory, all of which we trust will be cheerfully and promptly done.

We learn also that efforts are making to establish similar directories in Washington and in Cincinnati, to which we wish all success.

THE practical philanthropy of George Peabody is not only adding to the comforts of those who live in the "Peabody Buildings," but to their length of life. During sixteen years the deaths in these buildings have been at the rate of $16\frac{7}{10}$ per 1000 per annum, while the general death-rate of London has been $23\frac{4}{10}$, and of the crowded districts immediately around the Peabody Buildings, from 30 to 40 per 1000.

SPECIAL ARTICLE.

THE MEDICAL NEWS COMMISSION

ON THE

MANAGEMENT OF VACCINE FARMS AND ON THE PROPAGATION OF BOVINE VIRUS.

(*Continued from p. 441.*)

THE VACCINE FARMS ABOUT NEW YORK.

SUBSEQUENTLY, we examined the farms in New York and Brooklyn. Dr. F. M. Wells, Director of the Vaccine Department of the New York Dispensary, claimed to be a producer of bovine virus, and informed us that his establishment was situated somewhere in the State of Massachusetts, but as it was not solely and exclusively under his own control and management, he did not feel at liberty to invite us to visit it.[1]

We then visited the vaccine farm of the Health Department of the City of New York, which is under the able management of Dr. J. B. Taylor, Inspector of Vaccination. For several years past the department has been propagating bovine virus, and supplying the vaccinating corps with the same free of cost. The surplus virus produced is sold, and the income from this source is deposited in the City treasury to the credit of the department, and may be drawn against under certain restrictions. For further information, we cannot do better than give a few quotations from a circular issued by the department:

"The Board of Health of the Health Department of the City of New York, in accordance with an 'Act to Secure Effective Vaccination in the City of New York, and the Collection of Pure Lymph or Virus' (Chapter 635, Laws of 1874), offers to sell to the profession at large pure bovine vaccine virus, such as this department has used exclusively for several years past, for the vaccination in this city of from 50,000 to 100,000 persons per year."

"Animal crusts, as well as tubes, are so thoroughly unreliable, that this department neither uses them nor offers them for sale."

"From long experience this department has found that the virus from every calf will not give good results; and that the only way to be positively certain that it is reliable is to test the virus from each calf before using it to any extent. That is, one of the physicians, who is exclusively engaged in tenement-house vaccination, vaccinates from ten to twenty babies with each lot of virus on the same day that it is collected, and he examines these vaccinations on the third or fourth day thereafter. If the virus shows the proper degree of activity at that time, it is issued for general use; if not, it is thrown away, and the virus of a previous date is employed."

"According to a regulation made by this department some years since, virus will be supplied to all public charitable institutions in New York City, gratuitously."

The location of the "farm" is at Clifton, N. J., about twelve and a half miles from New York. The stables and other conveniences here are not satisfactory to Dr. Taylor, and the department is now seeking more suitable accommodations. The virus being propagated is a lineal descendent of the Beaugency stock introduced into America by Dr. Martin.

The ages of the animals inoculated range between one month and one year; Dr. Taylor's preference being for sucking calves. The calves are required to be healthy and well fed.

The inoculations are made on the inner surface of the hindquarters of the animal, and in the region of the udder. The calf is placed on its side, the hind legs are separated, and maintained in that position during the operation. Quills are used almost altogether for collecting lymph, and they are charged on both ends. From 200 to 2000 quills (the number depends on the development of the vesicles, and certain unknown peculiarities of the calf) may be charged from one heifer. The collection is almost always made one week from the date of inoculation. Dr. Taylor and his assistant, Dr. Pardee, personally attend to the inoculation and the collection of virus. The virus is preserved by being kept in air-tight glass jars, and at a moderately cool temperature.

Calling next on Dr. William E. Griffiths, of Brooklyn, we were informed that he had been engaged in the business of propagating animal virus since 1874. His stables were said to be located in the country, a short distance from Brooklyn, and as

[1] All the vaccine farms of Massachusetts, of the existence of which we have any knowledge, are located in the vicinity of Boston, and have already been referred to.

no work was being done at that time, they were not visited.

Dr. Griffiths claimed to be propagating an entirely original "stock" of virus, having its origin in a sporadic case of cow-pox which occurred in New York State in 1874. So far as we can learn, the history of this case has never been placed on record. To make known the history of every new "stock" of bovine virus discovered and propagated is certainly a duty that the discoverer or propagator owes to the profession and the cause of science.

For purposes of inoculation, Dr. Griffiths prefers calves from four to eight months old. He makes the insertions on the lower part of the abdomen; generally collects the lymph on the sixth or seventh day after inoculation—sometimes earlier, never later; prefers to collect lymph on quills to any other means; supplies bovine crusts, but does not recommend them very highly.

While in Brooklyn we learned that Drs. Robbins and Lewis were also engaged in the business. We called on Dr. Robbins, and he stated that they were at present producing so little virus that they had nothing to show us.

Subsequently we called upon Dr. Frank P. Foster, one of the oldest, as well as one of the most careful and conscientious, producers of bovine virus. He invited us to visit his laboratory, which is at present located in Greenwich, Connecticut. As to the length of time Dr. Foster has been engaged in the specialty, and the stock of virus he is propagating, Dr. Martin says:[1] "The first physician who followed my example in the enterprise of propagating animal virus was Dr. F. P. Foster, of New York, to whom I gladly furnished supplies of virus and every assistance in my power. Dr. Foster, in his official position in connection with the New York Dispensary, established a "service" of heifer vaccination, which, in that position, and lately as a private enterprise, he has continued with gratifying success."

(*To be continued.*)

REVIEWS.

CIRCULARS OF INFORMATION OF THE BUREAU OF EDUCATION: DEPARTMENT OF THE INTERIOR. No. 5. 1881.

CAUSES OF DEAFNESS AMONG SCHOOL CHILDREN, AND ITS INFLUENCES ON EDUCATION, WITH REMARKS ON THE INSTRUCTION OF PUPILS WITH IMPAIRED HEARING, AND ON AURAL HYGIENE IN THE SCHOOLS. By SAMUEL SEXTON, M.D., Aural Surgeon to New York Eye and Ear Infirmary, etc. Washington: Government Printing Office, 1881.

IN the letter which forms a preface to this very valuable brochure, the Hon. John Eaton, Commissioner of Education, informs the Hon. Secretary of the Interior, that the causes of deafness among school children are numerous and important enough to justify a special investigation of the subject, and he has therefore requested Dr. Sexton to prepare a paper on the subject. The author, therefore, has collected in the pages of this pamphlet some of the "more practical conclusions regarding the causes of deafness among school children, together with suggestions of a hygienic and prophylactic nature, drawn from his own observations among a large number of pupils in dispensary, hospital, and private practice." Dr. Sexton has performed his task in a most able, explicit, and comprehensive manner, so that the teacher in the public schools and the parents of a pupil may read and understand how important their part is in the prevention of ear disease. On page 12, the author, under the head of "Affections of the Ear from Nervous Sympathy," gives a most lucid description of the manner of taking cold in the head through the nervous sympathy between the nasal cavities, the ears, and throat. Not only is this so plainly and wisely set forth for the guidance of parents and teachers as to render the brochure a valuable guide to them in their respective duties to the children entrusted to them, but also to force us to most heartily recommend this chapter, as well as the entire work in fact, to the careful perusal of all physicians; for we believe that, after carefully reading the paper of Dr. Sexton, the general practitioner will not only understand a great deal more about ear diseases among his little patients, but he will be better fitted to prescribe at least a prophylactic hygiene, if not to conduct a successful course of treatment for the ears.

[1] Transactions of the American Medical Association for 1877.

SOCIETY PROCEEDINGS.

KENTUCKY STATE MEDICAL SOCIETY.

Twenty-seventh Annual Session, held at Louisville, April 5, 6, and 7, 1882.

(Specially reported for THE MEDICAL NEWS.)

THE Twenty-seventh Annual Session of this Society was held in Louisville on April 5, 6, and 7, 1882.

The President, Dr. J. W. HOLLAND, of Louisville, delivered the annual address.

DR. W. O. ROBERTS, of Louisville, made an elaborate report on the

PROGRESS OF SURGERY.

Concerning antiseptics in surgery, he stated that the entire question of the use of these agents is almost as unsettled in professional opinion as it was immediately after their introduction.

In abdominal surgery, Mr. Keith, of Edinburgh, has altogether abandoned the spray and does not rely upon antiseptic precautions so much as upon thorough cleanliness. In the treatment of wounds the drainage-tube retains its claims for favor, and indeed has now a favored and fixed position in surgical methods.

In abdominal or Fallopian pregnancy, the past year has witnessed an entire revolution in reference to the disposition of the placenta after operation. Instead of its removal, many leading surgeons insist that it should be permitted to remain within the cavity, to be detached by natural processes or to become absorbed or encapsuled. Previous to the advent of the antiseptic system in surgery, the operations of nephrotomy and nephrectomy had not been frequently performed. The mortality in these cases was excessive. Now these operations are numerous and the mortality is greatly reduced.

In gunshot wounds of the abdomen, the necessity of interference in order to thoroughly cleanse the cavity is generally recognized, and Dr. J. Marion Sims claims that the old expectant method of managing these cases should be abandoned in favor of the modern method of early interference. Bigelow's operation has continued to grow in favor, and is now advocated and practised by all leading surgeons. Sir Henry Thompson practises this method with his characteristic success, and urges the removal of the entire stone at a single

sitting, and by means of the smallest instrument possible.

A number of cases have been reported in which gangrene has followed amputation where Esmarch's apparatus had been used during the operation, thus necessitating the utmost caution as to the length of time it be allowed to remain upon the limb.

Dr. Wm. H. Wathen, of Louisville, read a paper on

ABDOMINAL SECTION VERSUS CRANIOTOMY.

He claimed that the increased success of abdominal section under the improved methods of modern surgery justifies a timely operation in the interests of both mother and child, and should have the preference over craniotomy. Dr. Wathen made a detailed report of recently compiled statistics of the Cæsarean section. When performed early, he stated that about eighty per cent. of children have been delivered alive. Of nineteen double operations upon eight women in North America, but three deaths are reported; and in one hundred and nineteen operations upon forty-eight women, but eight fatal cases have occurred. He claimed that in future the operation should be regarded as one of election, without special reference to the old statistics compiled from operations performed under hopeless circumstances. He believes that if performed at a sufficiently early time the mortality will be greatly reduced. He compared with the statistics already cited the record of the operation of craniotomy, and expressed his belief that the current improvements in the results of abdominal section are destined to work great changes in the established opinions and practice of the profession in this connection.

Dr. D. W. Yandell, of Louisville, in discussing the paper, expressed the opinion that the data are as yet insufficient to justify any great extension of the accepted field of the Cæsarean section. In the consideration of such statistics, we must bear in mind that fatal cases do not so readily find place as do the successful cases. The speaker illustrated this point by giving some personal experience in collecting statistics on tetanus. When an indiscriminate collection of recorded cases gave a result of thirty per cent. of recoveries, on making personal inqury into all the cases of the reporters, the percentage of recoveries dwindled down to an infinitesimal degree.

The indisposition to report unsuccessful cases is especially prevalent in America. Here medical men rarely report unfavorable cases, while in Europe both fatal and successful cases are reported with more uniformity,

Dr. Wathen, in reply, said that he quite agreed with Dr. Yandell concerning the untrustworthy nature of statistics in general, but in the subject under consideration the statistics have been thoroughly studied and corrected by Dr. R. P. Harris, of Philadelphia, that more than ordinary reliance is justified.

Dr. M. F. Coomes, of Louisville, read a paper on

COLOR-BLINDNESS,

Stating that this defect may be congenital or acquired. Neither the tissues nor humors of the eyes (in so far as can be detected) of the color-blind differ in any respect from those of persons possessing the normal color-sense. Whether this condition results from some alteration or defect in the recipient organ, the retina, or in the central perceptive organ, the brain, has not yet been determined. It is possible that in individuals the perceptive organs relating to color may be altogether wanting, or, if developed, they may become diseased and incapacitated for the discharge of their functions. We do know that in some phases of atrophy of the optic nerve, the chromatic sense becomes impaired; and also that, in certain diseases of the eye, portions of the retina become color-blind. The excessive use of tobacco and alcohol, either one or both, may induce the condition under consideration. The speaker stated that the chromatic sense may be lost and yet the vision of the subject remain so perfect that he can successfully and efficiently discharge the ordinary duties of a railroad employé, where the chromatic sense is not involved.

Among the causes of acquired color-blindness were mentioned severe concussion and shock, and excessive and long-continued strain on the organs of vision. This condition may be either temporary or permanent, when induced by the causes just mentioned. Dr. Coomes then exhibited an instrument, devised by himself, for testing the sight, relative to the chromatic sense. The instrument consists of a cylinder, the sides of which are composed of eight different colored glasses. By an ingenious arrangement this cylinder is made to revolve around a lamp within, so that one color after another is brought before the observer. This instrument is a great improvement over the lantern test, and will be found of great service in testing the chromatic sense. The speaker then illustrated the method of testing the sight as to color-perception, as practised by Prof. Holmgren, and known as Holmgren's method. In conclusion, he said the true method of testing the chromatic sense is by thoroughly utilizing both Holmgren's test, which is by the use of colored worsteds, and the lantern test, as demonstrated by the instrument presented with this paper.

SECOND DAY—APRIL 6TH.

After the transaction of miscellaneous business, Dr. Lunsford P. Yandell, of Louisville, made a report on

THE PROGRESS OF DERMATOLOGY.

Dr. Yandell believes that in proportion to its importance dermatology is more neglected by the general practitioner than any of the specialties. Though nature often records upon the skin the evidences of systemic disease, death is seldom brought about by disease of its tissues. This fact, with the unsatisfactory state of the therapeutics of skin diseases as usually taught and practised, has much to do with the indifference with which this important class of diseases is regarded by the average general practitioner. Dr. Yandell then gave an account of the state of dermatological therapeutics and pathology in the days of John Hunter. He then stated that, after a laborious study of the literature of dermatology in the early years of his practice, he devoted a year to the investigation of these diseases in the European hospitals. When he returned to his practice, after these studies, he found that he was able to do but little practically beyond the cure of those diseases of parasitic origin by means of sulphur and mercury, and the diseases of specific nature with mercury and potash. Besides this, the use of oxide of zinc externally, arsenic internally, and certain remedies acting upon special functions and organs composed the category of trustworthy therapeutic measures. Feeling the necessity of an improved system in the therapy of many cutaneous diseases, he had done something toward developing an improved system of practice in the advance of cutaneous medicine. The line of practice which he has tested with an extensive clinical experience through a number of years he desired to present in more elaborate form than has been heretofore published. By the method of treatment herein enunciated, he had reduced the cure of this class of diseases to a degree of certainty exceedingly satisfactory. Dr. Yandell declared that his views as reported from time to time upon this subject had been misapprehended. It had been reported that he taught a tripod pathology, consisting of malaria, scrofula, and

syphilis. This, he said, by no means indicated his position in this regard. While malaria and scrofula are most potent and widespread factors of disease, he believed that syphilis was much overestimated in this connection. The following propositions will explain the speaker's position:

(1) The causes of disease are few and the manifestations of disease are multiform.

(2) Among potent factors of disease relating to both general and cutaneous affections are malaria, scrofula, the catarrhal condition, the alcoholic, rheumatic, scorbutic, and gouty poisons, the contagious and infectious poisons, imperfect hygiene, and the vegetable and animal parasites.

(3) The local manifestations of disease should not be treated to the exclusion and disregard of the disease itself.

(4) Of the contagious diseases, only syphilis, and perhaps erysipelas, are specifically curable.

(5) In the treatment of skin diseases the general systemic condition and the underlying cause are to be constantly sought, instead of devoting the attention solely to external manifestations.

In conclusion, the speaker declared that more than twenty years of clinical study justified the views herein expressed.

DR. J. M. MATTHEWS, of Louisville, then read an elaborate paper upon

STRICTURE OF THE RECTUM AND ITS TREATMENT BY DIVULSION.

Dr. Matthews said: I beg to speak for a few minutes on the subject of stricture of the rectum and its treatment, and I shall take occasion to refer incidentally to the treatment by *divulsion*. This subject is of more importance than would appear at a glance. Few are aware of the number of cases that present themselves to the surgeon within a year. I do not know of any disease that calls for surgical interference that is of more importance and deserves more careful consideration. It is one of the most harassing afflictions that can affect a patient, besides being one of the most painful; it is, as a rule, when it comes under the care of the surgeon, beyond the hope of any permanent cure. If, then, there is any operation that can be devised to mitigate, if not such to radically cure, this affection, we certainly ought to consider it. Cases of obstinate constipation not unfrequently come under the care of the physician, and in these, not once in a hundred times is a local condition sought in order to explain it. I was glad, however, to hear the expression, a local manifestation of a constitutional disease. Although the consideration of the etiology is too great to begin upon in one discussion, yet in a general way the causes of stricture of the rectum may be enumerated in the order of their frequency as follows, viz., syphilis, cancer, traumatism.

Of course any fall inflicted that may produce ulceration, may cause stricture, when stricture as a natural result would follow, and this character of stricture is amenable to treatment; unfortunately, however, they are the rarest forms of stricture met with. That syphilis is paramount to cancer even I do firmly believe, and really, in my humble judgment, so far as the curability of the affection is concerned, it does not much matter whether it originate from syphilis or from cancer. I believe it is just as nearly incurable in the one case as in the other. It was long ago taught, and is still maintained by some, that syphilitic stricture is the result of deposit by some means of the chancrous pus within the rectum. On the other hand, I believe these strictures are invariably tertiary manifestations of syphilis. Let that be as it may, I am certain of one thing, that frequently the examination reveals a strictured passive tube, extending from an inch above the sphincter to four, six, or eight inches up the rectum, causing constant dribbling away of the passages, constant pain and griping, and in a few short months ending in death from peritonitis or exhaustion. Dr. Matthews then illustrated his remarks by the description of a typical case. Before doing so, however, he remarked that the pain is not a constant feature. He cited the case of a young woman, eighteen years of age, in which the diagnosis is positive, who has not suffered at any time from any pain of any description. He is of the opinion that when the fibrous condition is reached, the iodide of potassium and mercury can do no good. The treatment, therefore, in most cases as they usually appear at a late stage of the disease, can be only palliative, and for this purpose, first, is recommended laxatives; second, dilatation by bougies, to which I very strongly object, for the reason that, to accomplish any good, the dilatation must needs be performed every second day, and such frequency would inevitably lead to ulceration, which would result in more harm than good. A third remedy consists in partial division of the stricture by the knife; the fourth is constitutional treatment, which, as I have stated, I believe inefficacious; the fifth is colotomy, which can only be palliative, and as an operation for palliation merely it is too formidable, and when successful the results are too disgusting. Another operation consists in the complete removal of the affected portion, in contrast with which may be placed another which consists in the complete division of the stricture, which, in my estimation, is the preferable operation. This mitigates the suffering and the symptoms of unfavorable omen. Hectic fever will disappear, the appetite return, and the flesh be regained. Another operation which is now being revived, is that of *divulsion*. I reported a case to this Society four years ago, in which I believe I saved the individual's life by that performance. I might now report a case in which, very recently, I almost caused a patient to lose her life by it, when, in fact, all the good it did might have been accomplished in three seconds by the knife. In my opinion, division of the strictured surface is the safest and the best, because it affords the greatest relief. Forcible divulsion in these cases is attended by great risk and should not be practised. The use of bougies for dilatation is absolutely harmful in the great majority of cases, and under no circumstances should they be used where ulceration of the strictured surface exists.

In discussing the subject, DR. TODD expressed the belief that the importance of the subject, especially to country practitioners, was greatly overestimated on account of the rarity with which such cases are met outside of commercial centres.

DR. VON DONHOFF objected to the sentiments expressed by Dr. Matthews on the subject of the complete extirpation of the rectum, relating a case in which he prepared a subject for that operation, but after placing her under the influence of chloroform, he scraped the rectum with Thomas' serrated spoon. "The case," said he, "will probably come under my care again, when, if everything is favorable, I intend to remove the rectum, and bring down the gut and attach it."

DR. MATTHEWS said he doubted if, in the case related, the rectum could be brought down as Dr. Von Donhoff intended, and again emphasized his disbelief in the efficacy of mercury and the iodides to resolve the condition.

DR. L. P. YANDELL said that, in one or two cases coming under his observation, where the individuals had been the subject of previous antisyphilitic treatment, he had been able to bring about a condition of comparative ease and comfort by dilatation with bougies, supplemented by the treatment which he employs for scrofula.

Dr. Octerlony called attention to the fact that traumatism may be ranked as a cause of stricture in this situation.

Third Day—April 7th.

Dr. Ap. Morgan Vance, of Louisville, Ky., reported a case of

DOUBLE OSTEOTOMY (SUPRA-CONDYLOID METHOD), FOR CURE OF GENU-VALGUM,

exhibiting the patient, a girl three and a half years of age. Photographs taken just before operation showed extreme deformity, and comparison with patient's limbs proved the result to be remarkably fine.

The doctor described the procedure as follows:

The patient being chloroformed, the knee was placed on a firm block, well padded, a bistoury was sunk, blade transversely to bone, on outer side just above and back of upper border of patella; without removing this, the osteotome (¾ inch) was introduced beside it, entering same periosteal nick. The knife being removed, the chisel was driven directly through the bone until it reached the hard shell on inner side; its direction then being changed until the bone was sufficiently weakened to be broken by force. The chisel was left in the bone while the operator did this, using the leg as a lever, with one hand as a fulcrum at point of section, the thigh being steadied by an assistant. Not over two minutes were consumed in severing both bones. No antiseptic precautions were used, except the instruments being taken from a two and a half per cent. solution of carbolic acid.

Very little blood was lost. Absorbent cotton was applied over wounds immediately, and the limbs fixed in double spica of plaster in straight position. No shock, no pain, followed. No medicine was given before or after operation. Pelvic band of dressing was removed on eighth day. A new dressing was applied on eleventh day, union having taken place sufficiently for patient to raise limbs from table; passive flexion being allowed without pain. The wounds were found healed; no signs of pus, the cotton being stained by a few drops of dried blood.

In twenty-five days from operation, the splints were removed, and the child permitted to do as she pleased. Temperature remained about what it was before operation, 99° Fahr., in the mouth, the only elevation being on the evening of fourth day, rising to 99.8° Fahr.

Within a week she walked fairly, going up and down stairs alone.

After this report, Dr. Vance read a paper entitled, "Some Practical Suggestions on the Treatment of Spinal Caries," in which he urged the all-importance of strict attention to details in the treatment of this disease, declaring that failure was oftener due to lack of skill in the application by the surgeon than to the form of apparel used; good results being attainable with any of the recognized forms of apparatus properly applied and attended to by the surgeon himself.

Except in cases of disease near either extremity of the spinal column, before deformity has occurred, a diagnosis was fortunately easily made, as a surgeon was rarely consulted until deformity was evident.

The primary object in the treatment was to secure mechanical rest to the diseased structures by the use of the splint which best attains this end, and which at the same time requires the least attention to keep it fulfilling the indications.

Dr. Vance then discussed the merits and demerits of two principal forms of apparatus: The steel-brace and plastic dressing; objecting to the first on the ground that the surgeon was forced to use the work of the instrument maker, whose ideas and rules too often conflicted with the ideas of the surgeon, the result being a "hybrid" brace, which might, or might not, fulfil the indications.

He spoke more fully of the second plan of treatment, saying that, after a large experience of both, he believed the superiority of the plastic dressing to be undeniable. The plaster-jacket, as applied by Dr. Sayre, had, he thought, many defects. It was a splint that could not be used carelessly, especially as many surgeons seemed to think that the only requisite to success was to envelop the child's body in a case, regardless of the locality of disease, or the mechanical indications. This error, he illustrated by reference to cases that had fallen under his observation. The first, a girl, æt. fourteen, *sacro*-lumbar disease, where the lower border of splint did not reach the top of deformity. Several instances of disease in upper *dorsal* region were found with the top of jacket below *kyphos*, without any head support. That he had removed splints, applied by men of the highest authority, which were doing the patients positive injury, instead of giving the required rest, in the comfortable manner described by the advocates of this plan.

Dr. Vance suggested the following points in the use of this jacket:

Never suspend a patient with caries of spine, as it could not possibly do good, and might cause much harm.

Never use *dinner* or respiratory pads, as in a majority of cases such pads rendered the support worse than none.

Never let a plaster jacket remain on a patient without renewal longer than three or four weeks.

Use a head support when the disease is above the sixth or seventh dorsal vertebræ.

Apply the splint with the patient horizontal, after the method of Davy, of London.

Study each case individually, and watch carefully after the brace is applied.

He then spoke of the modifications of the plaster jacket introduced in the past four or five years, which had done away with many of its objectionable features; most notable among which were the removable splints of lighter material. The removable paper splint which he devised and first used in the summer of 1877, with the modifications and improvements since made, he thought was an appliance which nearer filled the demands in treating this disease than any other. After obtaining a cast, a variety of materials can be used in constructing a brace—paper, linen, thin sheep-skin, with glue, or saddle-skirt leather alone, first soaked in hot water, and moulded to the cast. For method of construction of this brace, he referred to his original article in the *New York Medical Record*, June 21, 1879. The only change since made was that the cast of the patient was now taken while in a horizontal position on a hammock.

The idea that there was any extension was a false one. The spine could not be extended unless the head was involved; then, if force sufficient to make extension was used, the apparatus would be unbearable, if not absolutely dangerous to the patient.

That any extension between pelvis and axillæ or thorax could be effected is absurd, as proven by the anatomical relations of the parts. The benefit derived was not from extension, but from compression or splint action, just as rest is produced in the plastic treatment of fractures, and the more equable the compression the better the effect. Therefore, instead of using dinner or respiratory pads, he decreased the antero-posterior diameter of trunk by the use of the hammock, in making the cast. He had never seen any trouble from the tightness of the splint after the first day or two; nor had he ever known hernia resulting from its use.

He advised, in the event of abscess appearing, the continuance of mechanical treatment, while enjoining

rest in a horizontal position. In *paraplegia*, the support to be continued unremittingly.

He referred to introducing vertical pads, so arranged as to be on either side of the spinal column, making a more accurate and comfortable splint, being just thick enough to relieve pressure over the spinous processes. He had found the most difficult part in the treatment was to decide when to discontinue mechanical support. This could only be done by careful experiment, by loosening the splint at night for a week, when, if no bad effect ensued, it to be removed at night, substituting a snug roller for awhile. After this practice has been continued a sufficient time, the splint may be removed and a corset applied, made to fit perfectly the latest cast taken. Constitutional treatment was of the utmost importance, life in the open air being the first condition in importance.

DR. J. A. LARRABAC read a paper on

CEREBRO-SPINAL MENINGITIS,

Detailing some interesting cases, and dwelling at some length on the subject of complications of the disease with pneumonia.

DR. A. H. KELCH, of Louisville, made some observations upon

OBSCURE BRAIN LESIONS.

Laying aside the anatomical grounds upon which the conclusions were based, he maintained that the "choked disk," upon which there is a diversity of opinion as to its relations to diseases of the brain, occurs as the result of those conditions of the brain which interfere with the circulation of the blood through the ophthalmic artery, between its origin, between the nates and testes, and its distribution at the cribriform plate of the sclerotica, that the nervous manifestations caused by adventitious products in the brain will depend entirely upon the seat of such products, and not their character.

The paper was discussed by Drs. L. P. Yandell, J. A. Octerlony, J. W. Holland, and Von Donhoff.

In the afternoon, papers were read by DR. A. M. CARTILEGE, of the Louisville City Hospital, on *a Case of Acute Bromism*, and by Dr. BRANDT on *Tubercular Diarrhœa*.

DR. L. P. YANDELL, after some preliminary remarks, moved that a committee be appointed to express the sentiments of the Society with reference to the recent action of the eighty doctors representing the profession of the State of New York.

While waiting for this committee to form its report, DR. DUDLEY S. REYNOLDS took occasion to say that the quality of glass used in making

SPECTACLE LENSES

Is not what it ought to be, and he exhibited some specimens of lenses which by exposure had become tinted and, to a considerable degree, lost their transparency. The change of color he explained as being due to the adulterating material used in the manufacture of glass. The ordinary glass out of which window-panes are made is called crown glass, after the manner in which it is fused and handled after fusion. As to the constituents, silica, of course, is the important one. The crown glass made by the addition of borate of soda, provided it is handled in such a way as to secure a very thorough incorporation of the ingredients, is known as optical glass. The glasses that are made and sold as articles of commerce are fitted into the frames without any reference to their source. It has long ago been ascertained that the commercial lenses are seldom of the same refracting power on opposite sides of the frames. It has also been ascertained since the phakometer was invented by Snellen that such lenses are almost never symmetrically ground; that their refractory powers are not uniform throughout, thus showing that they have been moulded and afterwards polished. The uniformity with which such glasses are chromatic led to investigations into the mode of manufacture and experiments with different ratios of ingredients entering into their composition. To the present time, however, the secret of the manufacture of achromatic glass lies in the high temperature at which the ingredients are fused and the caution with which the glass is cooled. Dr. Reynold then demonstrated his remarks as to common glasses by means of an improved phakometer, several gentlemen passing up their glasses for examination, but few of which were found symmetrically ground, and none correctly graded.

DR. D. W. YANDELL, of Louisville, exhibited several specimens of ovarian tumors, making some remarks upon recent improvements in the operation of ovariotomy. Having spent some days with Mr. Thomas Keith, in Edinburgh, during the past year, he gave in detail the methods observed in ovariotomy by the great Scotch ovariotomist. The

COMMITTEE ON ETHICS

made the following report:

Whereas, Resolutions have recently been adopted by the State Medical Association of another State subversive of the Code of Ethics of the American Medical Association,

Resolved, That the Kentucky State Medical Society regards the Code of Ethics of the American Medical Association as the best system of ethics for the guidance of honorable medical men now in existence, and that we hereby declare our unfaltering and firm adherence to its principles, and must deprecate any alteration at this time in its honored teachings.

Resolved, That our representatives at the approaching meeting of the American Medical Association be and are hereby instructed to give their votes and influence in favor of unqualified adherence and fidelity to the Code as it now stands.

OFFICERS.

The following were elected for the ensuing year: *President*, Dr. A. D. Price, of Hanodsburg; *Vice-Presidents*, Dr. J. R. Bailey, of Logan County, Dr. T. D. Williams, of Springfield; *Permanent Secretary*, Dr. L. S. McMurtry, of Louisville; *Assistant Secretary*, Dr. S. M. Letcher, of Richmond; *Treasurer*, Dr. Edward Alcorn, of Hustonville; *Librarian*, Dr. L. C. Wagner, of Nicholasville.

Board of Censors.—Dr. C. H. Todd, of Owensboro; Dr. W. M. Fuqua, of Hopkinsville; Dr. W. W. Clearer, of Lebanon.

Committee on Prize Essays.—Drs. F. C. Wilson, L. P. Yandell, Turner Anderson, J. W. Holland, all of Louisville, and Dr. H. K. Pusey, of Garnettsville.

On motion, the society then adjourned, to meet on the first Wednesday in April, 1883.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

PROCEEDINGS OF THE EIGHTY-FOURTH ANNUAL CONVENTION.

Held in Hopkins Hall, of the Johns Hopkins University, Baltimore, April 11–15, 1882.

(Specially reported for THE MEDICAL NEWS.)

(*Concluded from p. 447.*)

APRIL 14TH—FOURTH DAY.

The first order of business, after election of new members, was a paper by Prof. H. NEWELL MARTIN, entitled:

THE INFLUENCE OF VARIATIONS OF ARTERIAL PRESSURE, OF VENOUS PRESSURE, AND OF TEMPERATURE ON THE ISOLATED MAMMALIAN HEART.

The speaker commenced by referring to the communication made by him last year to the Faculty, in which he had shown that it was possible to separate a dog's heart physiologically from all parts of the body of the animal but its lungs, and in this condition keep it alive for hours and available for study.

Since then the method of work has been greatly improved, and is now as follows: A dog having been chloroformed, curarized, or placed under the influence of morphia, is tracheotomized. Then the common carotids are exposed in the neck, ligated, and a canula is placed in the cardiac end of each vessel. Artificial respiration being started, the thorax is opened and both subclavians tied. Next a wide canula is inserted into the aorta just beyond its arch. The coronary arteries are now the only arteries of the systemic circulation which remain open. The brain, spinal cord, trunk, and limbs, are no longer supplied with blood and soon die.

The next steps are to ligate the inferior cava just above the diaphragm, the vena azygos near its junction with the superior cava, and the latter vein below the point where the left innominate enters it. All systemic veins are thus closed, except the coronary veins and the other small twigs from the heart opening into the right auricle itself. The pulmonary circulation is not interfered with at all. Heart and lungs are now the only parts of the body through which any circulation takes place.

A large canula is next tied into the cardiac stump of the superior cava, this canula is connected with a reservoir of (*a*) defibrinated dog's blood; (*b*) the same diluted with some 0.7 per cent. solution of pure sodium chloride in distilled water; or (*c*) with defibrinated calf's blood. The carotid canulas being opened, the blood in the heart and lungs (which would be apt to clot in a prolonged experiment) is washed out and replaced by defibrinated blood supplied from the reservoir connected with the superior cava. While this washing out is taking place, a thermometer is introduced into the left subclavian and its bulb pushed down into the aortic arch, in this position it is firmly tied; it serves to give, subsequently, the temperature of the blood pumped by the left ventricle into the aorta, and hence that of the blood circulating in the coronary arteries of the heart.

The animal with its heart and lungs completely isolated in this manner is now transferred to a warm, moist chamber, kept at a temperature of about 38° C. The canula in the superior cava is connected with a Mariotte's flask filled with warm defibrinated blood (dog's blood diluted with sodium chloride solution or calf's blood), and with this the heart is fed. Alongside this Mariotte's flask is another quite like it, but empty. The wide aortic canula is attached to a long rubber tube which extends through the roof of the moist chamber and whose distal end can be raised or lowered at will. These connections having been made all clamps are removed, and the heart taking blood from the full Mariotte's flask, under a known pressure, pumps it out by the tube connected with the aorta. This tube pours it into a funnel from which it is conducted to the empty Mariotte's flask; as one supply flask empties the other fills, and at the proper time by turning a couple of stop-cocks the first flask is disconnected from the heart and the other used to feed it, while the blood pumped out from the tube in the aorta, is now directed into the flask at first full but now empty. So throughout the experiment, each of the two flasks is made in turn feeding vessel and receiving vessel, for the blood pumped round by the heart. Uniform artificial respiration is maintained by a small water-engine. The carotid canulas are connected with manometers, which record pulse rate and arterial pressure on the paper of a kymograph. Under these conditions, we can vary at will venous pressure, arterial pressure, or temperature, while keeping all other conditions affecting the heart constant. Raising the exit point of the tube in the aorta raises arterial pressure, raising the supplying Mariotte's flask raises the venous pressure, and keeping these two constant we can warm or cool, at will, the blood circulating in the cardiac capillaries, and accurately learn its temperature by the thermometer whose bulb lies in the aortic arch.

Prof. Martin then gave an account of his experiments in three cases: (1) in which aortic pressure was alone varied, venous pressure and temperature being kept constant; (2) in which venous pressure was alone varied, aortic pressure and temperature being kept constant; (3) in which temperature was alone varied, venous and aortic blood pressure being kept constant.

In reference to aortic pressure, he gave a brief sketch of the very inconsistent results obtained by previous workers, most of them well known and justly esteemed as competent and accurate experimenters. Since such honored physiologists as Marey, Ludwig, Haidenhain, Nawrocki, Von Bezold, and Tschirjew had reached absolutely contradictory results as to the influence of variations of arterial pressure upon the rate of beat of the heart, it was clear that some kind of error was introduced in their methods of work. A careful consideration of these methods showed this source of error—all had worked at the problem under conditions in which either the heart was not set free from the influences of extrinsic nerve activities, or under which other things (more especially the temperature of the blood circulating in the coronary system) were altered in addition to arterial pressure. Whenever a change in the pulse rate was found it was attributed solely to the alteration of arterial pressure, all the other concomitants of this alteration being quite neglected. The errors which had thus crept in were illustrated by a critical analysis of the work of Marey and Von Bezold, the speaker referring to the latter as a physiologist whose untimely death had ended a career of the greatest promise for the elucidation of cardiac physiology. Prof. Martin then proceeded to describe his own work on this point. The isolated dog's heart being supplied with blood of constant composition, of a known temperature, and under a constant pressure from a Mariotte's flask, arterial pressure was raised and lowered rapidly between the limits of 40 and 210 millimetres of mercury, by elevating and lowering the level of the opening through which the tube connected with the aorta poured out the blood pumped into it by the left ventricle. No observation was made until the animal had been at least half an hour in the warm chamber, by which time it was certain that brain and spinal cord, deprived of blood for that period, were absolutely dead; and the rigor of the muscles of trunk and limbs, almost always quite marked by that time, proved conclusively that all the body of the animal, except heart and lungs, through which alone blood was flowing, were dead, inert masses; by the ligature of the systemic arteries and veins above described, they were at any rate thrown entirely out of any possible connection with the heart. The experiments, which were illustrated by charts, giving curves which showed arterial pressures and pulse rate during their execution, proved decisively that variations of arterial pressure within those limits had no direct effect whatever upon the rate of beat of the heart. The average carotid pressure in dogs of the size used is 110 to 120 millimetres of mercury, so that the limits above mentioned include, on the one hand, a

pressure very nearly double the normal, and, on the other, one less than half the normal. Certain still higher pressures, produced not merely by raising the exit of the outflow tube, but by narrowing it also, do affect the heart's beat, but the author had not yet had opportunity to fully investigate this part of the question, which has special interest, as the conditions thus produced probably represent very closely those in the heart during a paroxysm of angina pectoris.

Prof. Martin next described his experiments made on the isolated heart exposed to variations of venous pressure, arterial resistance and temperature being kept constant. The pressure under which blood was sent into the right auricle varied from that exerted by a column of defibrinated blood 7 centimetres in height, to that due to a column of blood 38 centimetres in height. These variations were of course produced by raising or lowering the Mariotte flask connected with the right auricle. The results, which were expressed in a chart constructed from tables of pulse rate and venous pressure, showed conclusively that changes in the latter had no direct influence on the rate of the heart-beat. Incidentally the speaker referred to the fact that a series of experiments now being carried on in his laboratory, in which not the pulse-rate, but the *work* done by the isolated heart under varying conditions, was the subject of investigation, had proved that changes in venous pressure had a great influence upon the amount of blood pumped out by the left ventricle in a given time; thus confirming for the mammal what Roy had shown for the frog, that it is pressure in the great veins and right auricle which mainly controls the amount of work done by the heart.

Prof. Martin next proceeded to describe a third series of experiments in which venous pressure and arterial pressure were kept constant, and the temperature of the blood sent through the isolated heart alone was varied. The temperature was measured by the thermometer in the aortic arch—and was accordingly that of the blood flowing through the coronary arteries.

It had been already known that temperature changes very greatly influence the rate of beat of the isolated hearts of cold-blooded animals. From the slower beat of the heart of warm-blooded animals while hibernating, and the quicker pulse of artificially warmed animals, as also the quick pulse of fever, it has been assumed that this also was true of the mammalian heart. But so long as the heart is in physiological connection, through nerves and blood current with other parts of the body, such a belief is merely probably correct; its validity is not proven.

In the case of fever, for example, we now have much reason to believe that the dry skin and high temperature are both the results of nervous disturbances by which the temperature regulating mechanism is thrown out of working order. It might well be, therefore, that the quick pulse also was due to nerve changes extraneous to the heart, such as paralysis of the cardio-inhibitory centre, or excitation of the cardio-accelerator centre, or both. This is moreover a case where experiments on cold-blooded animals are least reliable as bases of argument for mammalian physiology. Deductions made from the heart of the frog, an animal with no heat-regulating mechanism, and never showing true fever, can only be applied with great reservation to the heart of the mammal. It is nevertheless of supreme importance to know just what does cause the quick pulse of the febrile state, one of whose dangers is that the overworked heart will give out before the fever has terminated. If the rapid pulse-rate be determined by extrinsic nerve influences, or by poisons produced through abnormal nutritional conditions in various organs and conveyed to the heart in the blood, we cannot *à priori* say that cooling of the patient would slow its rhythm and ease the heart, but if it be proved that in an isolated mammalian heart kept under conditions where all but the temperature of the blood flowing through it is unvaried, hotter blood causes quicker pulse and *vice versa*, we have a valuable indication that cooling of the patient, as by carefully applied baths, may save life in cases of fever where death is threatened by failure of the heart.

Prof. Martin exhibited a chart illustrating by curves the pulse rate and temperature during one experiment. Beginning with blood at 37° C., this was gradually cooled to 30° C., and then slowly warmed again. It was seen that every fall in temperature was accurately accompanied by a slowing of the pulse, and every rise of temperature by a hastening of it.

Further experiment will be needed to decide whether anything else comes in as a factor in producing the febrile pulse rate, but the experiments make it very clear that the chief factor is a direct action upon the heart itself of the hotter blood flowing through its vessels.

The interesting questions—What is the highest temperature and what the lowest at which a dog's heart will still beat, are now under investigation.

In conclusion, Prof. Martin said that the improvements in this method of studying the mammalian heart, since he had laid a short account of it before the Faculty a year since, were largely made by his pupils, and he could hardly tell what part of the method was his and what the device of some one or other of them. In so far as the method had any merits, and it promises very much in the elucidation of points in cardiac physiology, it should go forth to the world as the "Baltimore Method."

DR. WM. M. KEMP read, as a supplement to the *Report of the Section on Sanitary Science*, a paper on the

HISTORY OF THE YELLOW FEVER EPIDEMIC THAT OCCURRED IN NORFOLK AND PORTSMOUTH, VA., IN THE YEAR 1855, IN ITS RELATION TO THE QUESTION OF QUARANTINING.

At this time he was Chairman of the Board of Health in Baltimore. The yellow fever raged with great virulence in both Norfolk and Portsmouth. Almost every town and locality shut its gates on Norfolk, nor would receive those flying from the disease. After careful consideration the Board of Health of Baltimore decided to open its port, and thousands availed themselves of the privilege of leaving Norfolk for Baltimore. The only quarantine rule was that resident physicians should remain on the steamers which plied daily between Norfolk, Portsmouth, and this city, and in case any person was found actually suffering from the disease he should be detained, but all others should be allowed to come freely. It had so happened that in 1853, and again in 1854, a fever had been prevalent in those sections of Baltimore near the "Basin." Early in 1855 the Board of Health had the basin and the water-front generally dredged and cleaned, and had seen that every street and lane throughout the city was cleaned, and kept so. All this was done before the hot weather. Here, said Dr. Kemp, we had the best conditions for an experiment, on a large scale, of the results of keeping open port. Here was a large commercial city in daily communication with another place, where near at hand yellow fever was raging, from which citizens were flying. The result was that, though several of the fugitives were attacked after reaching Baltimore, some of whom died, there was *not a single case of yellow fever originating in Baltimore*. He attributed this largely to the thoroughly good sanitary condition of the city at that time. He further considered that it showed the non-contagiousness of the disease; also that under good sanitary conditions there was no need of any quarantine against it.

Dr. John Morris remarked that the success of the experiment was due entirely to the fact that was just mentioned. He had been in the South, and considered the rigid quarantine adopted by the towns in Mississippi, Arkansas, etc., during the epidemic of yellow fever, though it seemed cruel, was not so. The sanitary conditions of those towns was such that had yellow fever been brought there it would have spread fearfully. He considered it a transferable disease.

Dr. W. Chew Van Bibber completed the report of this section by a report

ON THE DRINKING WATER OF MARYLAND.

He drew attention to the fact that Maryland has an area of 11,124 square miles, and the water area of Chesapeake Bay is 2,835 square miles. Along the northern line of the State, and for an average of forty miles south of it, the country is mountainous and hilly; in the northwestern part of the State, the mountains rise to 3,000 feet. The hills gradually diminish in elevation from 800 to 300 feet above the sea. South of Para's Ridge the hills are small, the land level, and but few feet above tide. The Eastern Shore and the four lower counties of the Western Shore border on salt water, and here the land is flat. Although this section possesses agricultural advantages, ague and fever prevail here to a greater degree than in other parts of the State. As every means taken to discover the cause of this disease in the air have failed, he desired to direct attention to the drinking water used in the two sections of the State, as, perhaps, as has been recently suggested, the cause for the disease may be found here. After briefly referring to some general facts in regard to some of the varieties of drinking water used in Maryland, he said that about half the inhabitants of the State make use of spring or well water, and the other half of stream or river water. The country residents depend upon the former. This water differs from rain water in having percolated through various substances found in the crust of the earth. An examination of the geological map of Maryland shows a great variety of different geological formations in the northern or hilly part of the State. In the southern part the land is homogeneous and of tertiary and post-tertiary formation, and it is here that ague and fever are most common, while in the north they are the exception. How do the waters in the two sections differ as to their sources? In the hills the wells are supplied by subterranean streams and basins; in the lowlands they may have three different sources: (1) Rain sinking into the crust of the earth, forming streams and basins underground; (2) deep streams among the primal formations; (3) percolation and filtration of sea water through the soil from the ocean and bay. At some distance from the sea-shore in alluvial soils there is a water line below the crust of the earth, where, at a certain depth, the water fluctuates with the tide. Cæsar demonstrated this fact in Alexandria; it was shown in digging the foundation of the Safety Deposit building of this city. Brackish water is frequently found present in springs and wells. This source of spring water in the tide-bordered counties must be large. By measurements made by the U. S. Coast Survey, the extent of the tide-water coast line of Maryland, taken by counties, is 2,815 statute miles—nearly equal in length to the average width of the Atlantic Ocean. This great length, and the increasing prevalence of ague and fever as it is approached, naturally suggest cause and effect. Some years ago Mr. Blower, of Bedford, England, suggested that the real source of this disease might be found in potable water. If either air or water alone convey the disease into the body, it is done by a different route and in a different way. If this question be solved, a change in the therapeutics of the disease will follow. In ague and fever the liver and spleen with the blood are the organs mostly changed. In yellow fever the alimentary mucous membrane is primarily affected, and, reasoning from these analogies, is there not a strong probability that the cause of this is swallowed with drinking water? Passing on, he spoke of the large water supply of Baltimore, which will furnish in twenty-four hours five hundred gallons to every person in the city. He then referred to matters of local interest, and spoke of the necessity of the protection by law of streams supplying cities. He reprobated the use of pump water in cities; spoke with approbation of the custom which is coming more and more into vogue of supplying the inhabitants of towns, etc., where pure water cannot be obtained, with pure water in bottles for table, general, or medical uses, at moderate cost. Mineral waters, we know, are less injurious than any alcoholic mixture, and it is to be hoped that plain and carbonized waters will be furnished to young people in cities and towns in grounds more attractive than the German lager-beer gardens. Water can be had in greater variety and at less cost than malt liquors; is more healthful, strengthening, and delicious; and has none of its bad consequences. Nothing will suffer from such a change but the criminal courts, the penitentiaries, and early death.

Several of the other Sections failed to report. In the Section on Anatomy, Physiology, etc., Dr. Randolph Winslow had prepared a report on *Some Anomalies in the Osseous and Ligamentous System*, to illustrate which he had brought a number of specimens to exhibit. At his own motion, as it was late, the report was read by title and referred to the Publication Committee.

Dr. Conrad, Chairman of *Section on Psychology and Medical Jurisprudence*, for the same reason moved that his report be read by title and referred. Adopted.

Dr. Chisolm, Chairman of the *Section on Ophthalmology and Otology*, reported. After some general remarks, he laid down certain

APHORISMS IN REGARD TO THE TREATMENT OF EYE DISEASES,

which, if general practitioners would follow, great benefit would ensue: (1) Do not blister. In nine cases out of ten it is useless torture. (2) Do not use nitrate of silver. In not one case out of fifty is it beneficial as generally prescribed. (3) Do not use acetate of lead, for fear of leaving lead marks on the cornea. Many will say this is taking away their whole armamentarium. (4) Weak astringents are the best remedies for affections of the mucous surface, combined with absolute cleanliness. (5) Use weak solutions of eserine for corneal affections. (6) Atropia solutions are essential to break up recent iritic adhesions. (7) When in doubt, call on a specialist.

Eserine is beginning to play a very conspicuous part in the cure of a large number of eye diseases, supplanting atropia to a large extent. The strength of its solution is one part in two hundred of water. As it causes contraction of the pupil, it is antidotal to atropia. It is useful in photophobia, by excluding the light; also in commencing presbyopia. A drop of the solution in the eye on rising, will, in these cases, sharpen the vision for reading during the day, though making distant objects misty for a short time. Its great value in eye diseases arises from its physiological action in aid of the circulation through the lymph channels of the eye, keeping up the nice equipoise between secretion within the eyeball and the escape of the used-up material. From this important action we should be prepared to find it efficacious in all cases of increased tension of the eyeball of which glaucoma is the type, and in all cases in which the corneal circulation is involved.

In all corneal affections eserine has taken the place of all other remedies. In cases of acute glaucoma, in which the filtration from the anterior portions of the

eye is interfered with, its local use has in some sense taken the place of an iridectomy by diminishing pressure. It is equally useful in cases of suppurative iritis, or when pus collects in the anterior chamber of the eye, and in purulent ophthalmia. When an operation is necessary for the relief of glaucoma, its mechanical action of spreading the iris over the lens is a decided protection against lens injury. Similarly after the operation for cataract it prevents iritic incarceration and inflammatory complications by pulling the iris away from the edges of the corneal wound. When atropia is used for examination a drop of eserine solution will re-contract the pupil in a few minutes, but it must be used several days to counteract the effect of the stronger solution of atropia. He referred to pilocarpin as a kindred substance, but of weaker power. Its chief use is when administered internally in half grain doses. It produces profuse sweating and becomes a powerful agent for equalizing the circulation, and thus removing local congestions. Acute attacks of glaucoma have been removed by it; also acute attacks of iritis and choroiditis have been cut short by it. No marked depressing effect has ensued from its nightly administration in half grain doses for long periods. He had obtained most brilliant results by its administration in acute retinal, iritic, and sclerotic inflammations. Salicylate of sodium was spoken of as having given excellent results in controlling iritic and scleral inflammations, whether rheumatic or specific. Homatropia possesses all the attributes without the intensity and persistency of action of atropia, thus causing much less inconvenience to patients. Antiseptics have not given to eye operators the advantages which seem to follow their use in the grosser surgery of the body, probably on account of the extreme delicacy and careful manipulation and most guarded cleanliness which are necessitated in their operations. After referring to one or two other remedies, he spoke of the operation of optico-ciliary neurotomy as a substitute for removal of the eyeball after loss of sight from injury, saying that some leading specialists had lost confidence in it, but that his own experience was still in its favor, having obtained excellent and permanent results from it. He spoke of and described plastic operations of the lids, saying that most brilliant results had been obtained from them, and concluded by reference to the hygiene of the eye in the prevention of near-sightedness in children and the examination for color defects in all those who operate on color signals. He showed that near-sightedness was rare as a congenital defect, except when hereditary, and from examinations made in public schools that observers had found it was least frequent in the primary and most frequent in the graduating classes, and also in the most studious. It is much more frequent in towns than in rural districts. It is from the age of eight to fifteen, while the eye coats are soft and yielding, that the antero-posterior diameter gives way by a bulging of the back wall of the eye, which is never remedied. Unhygienic influences in the schools are conducive to a general breaking down of the tissues, and then overwork of the eyes causes the rest of the mischief. If the eyes of all children were examined by competent physicians and glasses adjusted to those who needed them, much suffering in after life would be saved. Then adjourned.

APRIL 15TH.—FIFTH DAY.

Dr. JOHN N. MACKENZIE, read a paper on the

DIPHTHERITIC ULCERATION OF THE AIR PASSAGES IN ITS RELATION TO PULMONARY PHTHISIS,

in which he referred, first, to the great difference of opinion that still prevails among medical authorities as to the correct interpretation of the reciprocal relationship between pulmonary consumption and ulcerative disease of the upper air passages. The existence of true tubercle as one of the chief, if not the chief, etiological factors in the production of what is commonly known as laryngeal phthisis, cannot now be gainsayed, and it now only remains to be decided whether all forms of ulceration of the upper air passage, which are encountered in the course of general tuberculosis, are to be referred directly to the tubercular diathesis as their primary cause, or whether, on the other hand, there are not some which may be regarded as accidental, owing their origin to influences associated with, but not necessarily dependent upon, the tubercular process.

The so-called *aphthous erosion* of the older writers was first depicted in the atlases of Cruveilhier and Albers, and clearly distinguished from tubercular ulceration by Rokitansky, who calls attention to round or oval erosions of the mucous membrane, surrounded by a scarlet border, and covered with a yellowish slough, which are found during the course of pulmonary phthisis in great number in the trachea, and which, after extrusion of the slough, coalesce, and lend to the membrane a sieve-like, worm-eaten appearance. Those which are not tubercular ulcerations are, he says, in greatest number on the side of the trachea corresponding to the lung most diseased. Förster shows that this form of ulceration may so resemble the tubercular that a microscope is needed to differentiate them. He considers most of these so-called *aphthous erosions* really tubercular. Others look upon them as catarrhal, or refer them to follicular ulceration, whilst their tubercular nature is maintained by others.

The writer had adopted the title *diphtherite* of the air passages in uniformity with what the histological study of their development has led him to regard as the correct pathology of these erosions. Dr. Hans Chiari had given him the opportunity of examining the respiratory organs of all patients dead of phthisis in the Rudolph and Jewish Hospitals in Vienna, for a period extending over five months.

The following is a description of this diphtheritic erosion, based upon an analysis of these cases, while the relations between it and the pulmonary phthisis are defined as accurately as possible.

Macroscopical Appearances.—Diphtheritic ulceration appears as small, mostly superficial, irregularly round or oval erosions of the mucous membrane, varying in size from a pin's head to a small pea, and which, separate and distinct, stud the surface of the membrane, or, coalescing, form a large ulcer, which spreads irregularly over the mucous surface. Commencing thus, they assume later a more characteristic appearance; their walls become sharp, regular, and somewhat elevated, and vary from a light reddish shade to a pronounced livid hue. The base presents either a smooth or rough, uneven appearance, generally covered with a yellow slough, or more or less orange-colored exudation. The ulcers are surrounded by a brilliant scarlet border, the mucous membrane between them is slightly swollen, and deeply hyperæmic. These ulcers are always multiple, and are most frequent and abundant in the lower portion of the trachea, generally in the posterior wall, though the whole membrane of the trachea may be covered with and even completely destroyed by them. They are frequent in the bronchi, but were never found in those of the unaffected lung. In most cases they can be traced directly into the cavities themselves. They are less frequent in the larynx and pharynx, selecting in the former chiefly the laryngeal aspect of the epiglottis, the anterior surface of the arytenoid cartilages and inter-arytenoid fold in the latter, chiefly the pyriform sinuses. In the larynx they

approach more closely the type of simple catarrhal ulceration. They are sometimes associated with or near tubercular ulcers, and are more frequent than those in the trachea.

Microscopical Appearances.—The diseased structures were carefully hardened in Müller's fluid and alcohol, and cut into a series of consecutive sections. All were colored with borax carmine and after washing out in absolute alcohol examined in oil of cloves. The sections presented in general the typical appearance of circumscribed diphtheritic inflammation of mucous membrane. Where there were sloughs, the epithelium and upper layers of the mucosa were converted into a finely granular detritus, and the neighboring connective tissue of the mucosa, and to a great extent of the submucosa, was highly infiltrated with lymphoid cells. This infiltration, while invading the tissues between the mucous follicles, did not much involve them in the inflammatory process. In the spots where ulceration had already occurred like conditions were observed in the base and edges of the ulcers and in the surrounding tissues. Here and there the transition stages of these processes could be recognized, viz., the nodules of necrobiotic tissue where the slough had begun to separate, though still adhering closely at points. The first stage of the diphtheritic process seemed to consist in a high grade of small-celled infiltration of the mucous membrane in its upper layer with cloudy swelling of the superimposed epithelium. Distinct miliary tubercles were to be seen neither within or near these nodules. Sometimes, especially in the bronchi, individual nodules coalesced. Thus these ulcerated areas are the result of a circumscribed superficial diphtheritic inflammation of the mucous membrane, *i. e.*, an infiltration of its tissues with so rich and rapid cell proliferation as to end in necrosis and death of the superficial layers.

That they are related to the phthisical process in the lungs is shown by the fact that they are most frequently found in connection with it, and its seems most rational to consider that the foul contents of the lung cavities, lingering in the bronchi and lower trachea, so irritate the mucous membrane that it reacts with diphtheritic inflammation. Dr. Mackenzie then speaks of the theories of Louis and his followers and that of the Heinze and others as to the *rôle* played by the sputa in laryngeal phthisis, and gives his opinion that a reconciliation of these divergent views may be accomplished by referring to the corrosive action of the sputa those ulcerations alone which have been considered. Thus the influence of the sputa is reduced to definite dimensions and the errors of both sides avoided. In favor of this view we have the prediliction of these ulcers for those places which are in constant contact with the sputa—their increase in number as the lungs are approached—also the fact that they may be traced from the bifurcation of the trachea to the division of the bronchial tubes, where they always become visible in that tube only which leads to a cavity—that they are not found in the bronchi of lungs not the seat of cavities or advanced phthisical change—that they are at times present in the œsophagus, stomach, and intestines from swallowing the sputa, and lastly that they are occasionally present in suppurative pneumonia and gangrene of the lung.

These lesions are pathologically distinct from the tubercular ulcer, though possessing some of its external characteristics. Although they owe their existence to the disintegration of the lung, the following are the reasons why they should not be considered specific tubercular products: (1) They differ histologically in no respect from the circumscribed diphtheritic ulceration occurring without tuberculosis. (2) That identical lesions histologically are found, though less frequently and abundantly in the air passages, and particularly in the trachea, as a secondary complication in diseases other than pulmonary phthisis, *e. g.*, circumscribed gangrene of the lung, or as a result of perforation into the trachea of broken-down sloughing bronchial glands. (3) That on other mucous membranes under similar conditions, such as a neighboring long-standing gangrenous process, or the constant passage of an ichorous discharge, ulceration in every way identical is found.

The great number of the ulcers, their absence in simple catarrh of the air passages, acute or chronic, their characteristic macroscopic and microscopic appearances are sufficient to exclude the idea of their catarrhal nature, and strongly militate against the hypothesis that would relegate them to the simple inflammatory condition of the mucous membrane, which often ushers in or accompanies the phthisical process in the air passages.

Dr. I. E. Atkinson read a paper by title, on "*Simple Chancre Affecting the Preputial Margin.*" It was referred to the Publication Committee.

Dr. Wm. Lee, read a paper entitled,

RECURRENT HEADACHES IN CHILDREN.

It was intended to be a suggestive paper, calling attention to the frequency of the complaint and to its usual signs and symptoms. Special reference was made to the influence of heredity, hysteria, the rheumatic, gouty, and syphilitic diatheses. Headaches generally accompany great irritability of the nervous system. There is during the attack great listlessness in the expression of the face, and the muscles generally have a flabby doughy feel. The therapeutics of these attacks are very imperfect except in those of syphilitic origin.

MISCELLANEOUS BUSINESS.

The Faculty then listened to the report of its committees; among others, to that on the establishment of a Nurses' Directory, which reported favorably; to the Library Committee, and to the special committee on the Library Building. The suggestions in these reports were deferred to a special meeting to be held on the 2d of May.

It was announced that Dr. Toner, of Washington, had offered his valuable library to the Faculty, on condition, that they erect a fire-proof building, in a certain style, for the reception of it. As the Faculty could not yet see its way to making a definite promise to this effect, a vote of thanks was given to Dr. Toner, and his offer declined.

Dr. Conrad introduced a resolution that the Faculty appoint a committee to consider the best steps to be taken to establish a proper State oversight of the insane and protect them from abuses, and sane persons from unjust confinement in asylums, etc., the committee to report next year. Dr. Conrad wished it understood that he did not know of any case in Maryland of a wrong use of power by those in charge of these asylums, but such protection was only just, and he thought the profession should take the initiative. Further consideration of this was deferred to the next special meeting.

The title of the Section on Ophthalmology and Otology was enlarged to include Laryngology.

A vote of thanks was passed to Dr. Archer for the presentation of books and antiquarian articles of interest to the library. A similar vote was passed to Dr. W. G. Regester for the impartial and thorough manner with which he has for several years discharged his duty in his office of State Vaccine Agent, from which he has recently resigned. Votes of thanks were passed to the president, trustees, and professors of the Johns Hopkins University, for the use of Hopkins Hall; also to the retiring President of the Faculty for the able and impartial manner in which he had presided over the meetings.

The new officers elected were: President, Dr. William M. Kemp; Vice-Presidents, Drs. Richard McSherry and T. S. Latimer; Secretary, Dr. W. G. Regester; Assistant Secretary, Dr. G. Lane Tanneyhill; Treasurer, Dr. Judson Gilman.

The President, after announcing the names of the standing committees and the appointments on the various sections, and congratulating the Faculty on the success of the present convention, put the motion for adjournment, which was carried. The annual meeting of the Faculty will begin in the future on the fourth, instead of the second, Tuesday in April.

NEW YORK COUNTY MEDICAL SOCIETY.

Stated Meeting, April 24, 1882.

After the usual preliminary reports, the paper of the evening was read by Dr. A. D. ROCKWELL, and was entitled, *Observations on Hemiplegia, based on Eighty-one Recorded Cases; with Special Reference to Cerebral Localization.*

He remarked that while the symptoms and grouping of symptoms vary very widely in many cases of hemiplegia because of the special part or parts of the brain affected, yet in hemiplegia, as in other pathological conditions, there was a common and readily recognized type of the disease.

A case illustrating the symptoms of a typical hemiplegia was then related. The regional or anatomical diagnosis was effusion of moderate quantity into and around the corpus striatum. In addition to this case, Dr. Rockwell had a sufficiently detailed record of 18 others, the symptoms of which were enough in accord with the one related as to justify a similar diagnosis as to the seat of the lesion.

In 13 of these 19 cases, the paralysis was on the right side, and in the remaining 6 upon the left side. Of these 13 cases involving lesions of the left hemisphere, 9 were in greater or less degree amnesic or aphasic, while of the 6 cases involving the right hemisphere, not one was thus complicated. In analyzing all his cases, 81 in number, with reference to the side affected, he found that right hemiplegia preponderated in about the same proportion as in the 19 typical cases (lesions in or about the corpus striatum) just referred to. Right hemiplegia occurred 49 times, left hemiplegia 30 times, and double hemiplegia twice. While it is evident that persistent hemiplegia with aphasic symptoms depends upon left cerebral lesion, as a matter of fact, the aphasia not infrequently almost entirely disappears, while yet the paralysis of motion remains. This could not well be explained if it were true, as M. Broca long ago declared, that the faculty of articulate language was located in the left frontal convolution. On the contrary, the experiments of Fritsch, Hitzig, and Ferrier show that in every essential point the brain is symmetrical. It is rational to believe, therefore, that the reason why loss of the co-ordinating power of speech is so universally associated with left cerebral lesion is, that as most people are right-handed, so are they left-brained, and in lesions of the left hemisphere with aphasia, the memory of words is *not* totally destroyed; the victim is without the power of articulate speech because the right side of the brim has been so little exercised as to be incapable of at once acting alone. When aphasic symptoms disappear, therefore, it may be said that the right side of the brain becomes educated in the same way that the left hand is educated when its fellow is disabled. As illustrating the occasional value of treatment in cases when nature has failed to be of service, Dr. Rockwell referred to the case of a lawyer, who, in 1873, was prostrated by hemiplegia associated with aphasia. In a short time the patient regained in great measure the power of motion, but for three months there was absolutely no improvement in the power of speech. Upon submitting him to the process of cerebral galvanization, improvement began almost immediately, and in a few weeks he could converse with comparative freedom. Acute sloughing, on the contrary, is generally associated with damage to the *right* hemisphere; is, as a rule, indicative of speedy dissolution, and is believed to depend on trophic rather than on vaso-motor changes. Of the two cases of acute sloughing that he had seen, both were associated with lesions of the right hemisphere, and were speedily fatal. A condition of increased heat and swelling of the paralyzed limb was described, which continues an indefinite length of time. Out of the eighty-one cases, there were five that presented these symptoms. In these cases it was evident that the lesion, whatever or wherever it was, exerted an inhibitory influence, either directly or reflexly, on the vaso-motor centre. The pons varolii is regarded as especially a regulative centre for vaso-motor nerves, but the symptoms were manifestly not those that follow damage to that sensitive body. It was hardly possible to locate the lesion in the crus cerebri, as in such a case there would probably be a concurrent paralysis of the third nerve.

Injuries to the optic thalamus, however, owing to its close proximity to the principal vaso-motor centre, have been so frequently found associated with these symptoms of increased temperature and swelling that, in the cases described, this part was believed to be seriously involved.

Of two cases where the lesion was supposed to involve both the pons varolii and the crus cerebri, the history of one was given.

The attack occurred suddenly in the person of a working man, aged fifty-five. The character of the paralysis relating to the extremities, the face, and the tongue, was of the usual character.

In addition, there was some difficulty of deglutition, with painful hyperæsthesia of the paralyzed side of the face, due probably to injury to the fifth nerve. The patient also became exceedingly emotional. The symptoms pointed undoubtedly to lesion of the pons in its upper lateral portion. The symptom that indicated damage to the crus cerebri, was paralysis of the third nerve, on the same side as the brain lesion. The results of this condition are well known, being ptosis of the eyelid, dilatation of the pupil, and external squint. This last symptom is due to the fact that all the muscles of the eyeball become paralyzed, except the external rectus and superior oblique. The temperature of the paralyzed limbs was decidedly higher than normal, as has been frequently observed in demonstrated cases of damage to the pons varolii. A case was also related of double hemiplegia, the lesion being located in the central part of the pons. A rare symptom termed "pulsus deferens" was noted in this case. The pulse in the right radial artery would repeatedly disappear and reappear, and was suggestive as indicating injury to the vaso-motor nerve tracts, and consequent interference with the contractile power of the arterial walls. After considering lesions of the cortical substance of the brain and irregular forms of anæsthesia, Dr. Rockwell related an interesting case of unilateral hyperæsthesia, associated with hemiplegia, which he saw with Dr. J. W. Greene. The patient was a hard drinker. His right side became suddenly and completely paralyzed, followed by such an acutely sensitive condition of the limbs, that the slightest touch caused great pain. Taking into consideration the completeness of the paralysis and the severity of the other symptoms, the case seemed about as unpromising as possible; yet in a few months he had entirely recovered. The treatment was almost entirely electrical, by the methods of

general faradization and central galvanization. The cause of this symptom is not positively known, but it has been suggested that as the destruction of one of the sense-centres for common sensibility results in hemi-anæsthesia, so a neighboring lesion, resulting merely in a reflex irritation of this sense-centre, may be followed by hemi-hyperæsthesia.

In the cases that were considered, no attempt was made to discriminate between the two principal pathological conditions, viz., rupture or occlusion of vessels, the differential diagnosis in this respect being not so important as the regional diagnosis. Especial attention was, however, called to a third class of cases, in which the cause is a spasm of the vessels. In one case, the attacks were intermittent, resulting in partial hemiplegia, which would soon pass away. These attacks extended over several months, and finally resulted in the death of the patient. A *post-mortem* revealed various abnormal conditions of the brain, but no rupture and no occlusion.

A point of practical interest in the consideration of this case lies in the fact, that applications of electricity for the purpose of affecting the vaso-motor system resulted in an immediate cessation of these attacks. This cessation continued from the 25th of September to the 4th of December, when a more violent attack carried the patient off. The paper closed with some references to the damage occasionally sustained by the nerves of special sense. The extent of the optic tract and its varied blood-supply render sight more liable to injury, in forms of intra-cranial disease, than the sense of hearing. Various local lesions, resulting not only in hemiplegia, but in total or partial blindness, might be enumerated. Especial attention was called to an occasional loss of this function, which is only temporary, and probably caused by the reflex effects of injuries to brain structure in close proximity to the corpora quadrigemina. The case bearing on this point to which attention was called, occurred in a man in middle life, who had occasionally suffered from epileptiform seizures. An attack two months previously resulted in incomplete paralysis of one side of the body, and also in a condition of total blindness. An induction current as powerful as could be well borne was applied simultaneously to both eyes of the patient, and was followed by an immediate restoration of sight. This result, surprising as it seemed at the time, and incredible as it may appear to those who have given the subject no thought, or who have never heard of cases analogous, is not so astonishing as it would seem, neither indicating any mysterious power nor novel therapeutic action of the current. Judging from reports of other cases, and the probability of the purely functional and indirect cause of the blindness, recovery would probably have taken place spontaneously, and was only hastened by the reflex stimulation of the electricity. The length of time during which sight was lost in this instance would seem to be exceedingly rare, for among a number of cases mentioned by Bastian, he refers to one where the blindness persisted for six weeks. He speaks of the loss of function as prolonged.

If we attempt to explain the interesting phenomena of the sudden and total loss of sight, and its sudden recovery, on the theory of indirect or reflex influences, some might suggest that, in the light of a better knowledge of cerebral physiology and pathology, these views are not received with the same favor as formerly. It must not be forgotten, however, that morbid anatomy is as yet far from being co-extensive with pathology. The most profound derangements of the functional activity of the nerve-centres may exist, and yet by none of our advanced methods of investigation has it been possible to discover any appreciable lesion; and until we have more accurate knowledge in this direction, the theory of reflex influences, on which we must fall back for explanation, although beyond the sphere of verification, is, at all events, plausible, and, to a certain extent, rational.

Dr. A. H. Smith, President of the Therapeutical Society, read a report on *Calcium Sulphide as an Anti-suppurative.*

Society adjourned.

CORRESPONDENCE.

NITRO-GLYCERINE AS A REMEDY.

To the Editor of The Medical News:

In an article in the current number of The News it is stated that nitro-glycerine is a new remedy. I desire to call attention to the fact that the drug was used many years ago, and articles detailing its physiological effects were written as far back as 1855.

I wish, now, to claim priority in suggesting its use in the treatment of various nervous diseases, including epilepsy and migraine, in appreciable doses. Dr. A. J. Minor and I conducted a series of experiments in 1875, which were subsequently published.[1] I afterwards suggested its use in epilepsy,[2] and see no reason to change the views I then enunciated, viz., that it was an excellent substitute for amyl nitrite, that it was serviceable as an abortant in epilepsy, and was of great benefit in sick headaches. I should not make this claim of priority were it not that a recent article has appeared upon the treatment of epilepsy in which no mention is made of my original discoveries. I presented, in 1876, the formula for the alcoholic solution which you speak of in your editorial, and which has since been employed.

After using the drug freely for eight years, I can say that I have never seen a case of poisoning, nor any grave or lasting nervous disturbance from its administration in the ordinary doses. In my own experiments, I, upon one occasion, took one drop of pure nitro-glycerine, and a number of alarming symptoms were developed. The initial disturbance was a feeling of indescribable head-fulness, a galloping, full pulse, an impending confusion, which deepened into semi-consciousness and temporary blindness. I was intensely sensitive to noises, and the laying of a friend's hand upon my shoulder caused me to start violently forward. This condition passed off in a few minutes after a solution of bromide of sodium had been taken, and was followed by protracted vomiting, which was almost of a cerebral character. For several days I suffered from after-effect, such as attacks of dizziness, transient blindness, and great weakness of the lower extremities.

The drug may best be given in the form of the saturated tablets prepared for me by Caswell & Hazard, of this city, each tablet containing ♏½–♏j. of a ten-per-cent. solution of nitro-glycerine in absolute alcohol.

Yours, truly.

Allan McLane Hamilton.

April 24, 1882.
43 E. Thirty-third St., New York.

NEWS ITEMS.

BROOKLYN.

(*From our Special Correspondent.*)

The Plumbing Law.—The Common Council of this city has appropriated the sum of $2,500 to enable the

[1] American Psychological Journal, Feb. 1876.

[2] Chicago Med. Journal and Examiner, Dec. 1876; and Nervous Diseases, their Description and Treatment, first edition, 1878, p. 413.

Department of Health to enforce the plumbing law during the current year. The law itself sets apart no money for the execution of its provisions, which have reference chiefly to the inspection of new buildings; and the city fathers are to be congratulated upon having had the courage and wisdom to give that sum of money for the purpose named in the face of no little clamor against the law on the part of those who are interested to retain the old fashion of cheap, unsanitary and unregulated plumbing of dwellings.

VIENNA.

(*From our Special Correspondent.*)

NOTES FROM THE CLINIC OF DR. HANS HEBRA, UNIVERSITATS DOCENT.—*Treatment of Scabies.*—Scabies is a very important skin affection, in Europe generally, and Vienna particularly. Army surgeons in Austria and Prussia especially meet the disease. As the Austrian soldiers are regularly inspected every two weeks, little time is allowed for the development of an extensive artificial eczema. The *quick treatment* is, therefore, available for them. The individual afflicted with scabies is sent to a hospital, is washed with soft soap, and then painted for two or three minutes with Vlemmick's solution. He remains in a bath of tepid water one hour, and rejoins his regiment two or three hours later. As before said, this treatment can only be employed when then are few excoriations.

The formula for Vlemmick's solution is:

℞ Calc. Vir., ... 1 libr.
Flor. Sulf., ... 2 "
Aq. Font., ... 24 "
Coque ad remanent 20 libr., et filtra.

Vlemmick is Surgeon-General of the Belgian Army.

The *slow treatment* observed in hospital and private practice, where there are usually many excoriations, an extensive artificial eczema, consists in the employment of Wilkinson's ointment. The formula is:

℞. Flor. Sulf., ... 2 parts.
Olei. Cadine, ... 2 "
Pulv. Cnt. Alb., ... 1 "
Aung. Porc.,
Sapon. Virid. āā, . . . 4 "

Two thorough frictions with this ointment, at an interval of twelve hours, is usually sufficient to effect a perfect cure. In the *Prussian Army* fifty grains balsam of Peru are allowed to every case of scabies.

Styrax liquidus is effective, and much employed, and may be substituted for beech tar in Wilkinson's ointment.

BACILLUS TUBERCULOSIS.—Robert Koch's assertion that tuberculosis is a bacteria disease, resting upon his succeeding in the production of tubercle-bacillii, which still in the 6–8 "Re-incultur," were capable of inoculation, has provoked much discussion, harsh criticism, and ridicule in Vienna.

THE MEDICAL EDUCATION OF WOMEN AT HARVARD.—At a stated meeting of the Board of Overseers of Harvard University, held on April 12, the committee on the medical education of women then presented through its chairman, Colonel Theodore Lyman, a report which made no recommendations on the part of the committee, but presented the opinion of the Medical Faculty of the University upon the advisability of permitting women to enter the medical school. The Faculty, while making no opposition to the medical education of women in general, decidedly oppose it in the Harvard Medical School. The school, they say, was founded for the medical education of men, and has been endowed and sustained for that purpose—a purpose which would be seriously perverted if the school were changed into an institution for the education of both sexes alike. The Faculty has been trying to raise the standard of medical education, and has already made it higher than anywhere else in America. The examinations are harder, and the course of instruction is more complete and thorough, and more distinctly graded than in any other university in the country. Beginning with anatomy, the course ends in the third and fourth years with more abstruse subjects. The fourth year is still voluntary, but an effort is being made to extend the regular course. The school and the Faculty have now all they can do, and are doing all that the community can ask of them; and all that they are doing is directly in the line of raising the standard of medical education, and educating students to be good physicians. The addition of a mass of women to the students would probably result either in seriously deranging the machinery of the school, or the standard of the school and of medical education would have to be lowered to the capacity of the many. The closing portion of the report of the Faculty consisted of the following votes, which they adopted in several recent meetings:

Voted, That if the President and Fellows have a desire to be informed of the present views of the Medical Faculty upon the question of female medical education in the University, the latter would respectfully state that, in their opinion, it is not advisable that the President and Fellows should open a course of medical study to women under the auspices of the University.

Voted, That the fact that the Medical Faculty is strongly adverse to undertaking female medical education would be, in their belief, of itself fatal to the success of an attempt in that direct.

Voted, That female medical education cannot be undertaken in the Medical School without a serious risk of detriment to the interests of the medical education now given to men.

In the above report eighteen of the Medical Faculty concurred, and from it two dissented. The report was made to the committee, of which Colonel Lyman was chairman, in a conference between that committee and a committee of the Faculty on April 3. It was thought best by Colonel Lyman and his colleagues, Mr. Moorfield Storey and Dr. R. H. Hodges, to present these facts to the overseers without comment. The report of the committee was accepted. In connection with it Colonel Lyman read a letter from the Faculty, stating their views with reference to the subject of the report, and also saying that, in their opinion, they ought to be consulted by the Corporation in all medical matters. The letter was laid on the table. Mr. Francis E. Parker then offered the following:

Voted, That in the opinion of this Board it is not advisable for the University to give any assurance, or hold out any encouragement, that it will undertake the medical education of women of Harvard College in the Medical School.

A somewhat prolonged and earnest debate, in which most of the gentlemen present took some part, took place on the subject of the motion, and it was finally adopted by a vote of twelve to eleven in the negative.

The final decision upon the question of admitting women to the Medical School does not rest with the Board of Overseers, but their advice in the matter was asked by the Corporation with which rests the decision. Of the seven persons who form the Corporation, only two are thought to favor the medical education of women at Harvard.

THE PUBLIC HEALTH.—For the *week ending April 15*, the following additional record of deaths is presented: From *small-pox* there were 6 deaths reported

in Hudson County, N. J.; 17 in New Orleans; 5 in Pittsburg; 2 new cases in the District of Columbia; and 1 death in Omaha, Neb. From *cerebro-spinal meningitis*, 9 deaths in Buffalo; 4 in Pittsburg; 2 in Chicago; and 1 each in Hudson County, N. J., the District of Columbia, and Detroit. From *diphtheria*, 3 deaths each in Hudson County, N. J., and Pittsburg; and 2 deaths each in the District of Columbia and Buffalo. *Typhoid fever* caused three deaths in Chicago; and 2 each in the District of Columbia, Buffalo, and New Orleans. There were 10 deaths from *scarlet fever* in Hudson County, N. J., an increase over the preceding two weeks; 7 in Buffalo; 3 in Detroit; and 2 in the District of Columbia. From *measles* there were 6 deaths in Pittsburg; 4 in Hudson County, N. J.; 2 in Buffalo; and 1 each in Detroit and Vicksburg. The number of deaths from *puerperal* diseases in Hudson County, N. J., amounted to 11, the greatest number reported during the past eight weeks.

Consumption caused 15 deaths each in New Orleans, Hudson County, N. J., and the District of Columbia; 7 in Buffalo; 3 each in Pittsburgh, Salt Lake City, and Vicksburg; and 2 each in Detroit and Omaha, Neb. *Pneumonia* caused 18 deaths in Hudson County, N. J.; 17 in Buffalo; 9 in the District of Columbia; 6 in New Orleans; 4 in Detroit; and 1 each in Davenport, Augusta, and Vicksburg.

For the *week ending April 22*, the returns of deaths from prominent causes were as follows:

Small-pox.—This disease, which has been so generally prevalent throughout the country, no longer assumes, with few exceptions, a prominent place in the weekly mortuary records. In the Atlantic cities there are but very few deaths from this disease. The eastern cities are almost entirely exempt. In the far south, New Orleans seems to be only city where the disease prevails to any considerable extent, and this experience has been a recent one. But few deaths are reported from the far west and the Pacific coast. In Chicago and, to a less extent, in Pittsburg and Allegheny City, the disease is quite fatal. Cincinnati is at present the central locality of prevalence of small-pox. With slight variation the mortality has been steadily increasing until the number of deaths has reached over 50 per week. With these prominent exceptions, the disease seems to be on the wane, and we may look for a still further reduction in the mortality as the warm season advances. The following is the summary of deaths for the week so far as received: New York City, 8; Philadelphis, 5; Pittsburg 6, and 29 new cases reported; Cincinnati, 51; Memphis, 2; and Wilmington, Del., and Milwaukee, each 1.

Cerebro-spinal Meningitis.—This disease is nowhere epidemic. But few cases are reported from this cause during the week.

Croup.—This disease is not especially prominent in any place. The deaths were 15 in New York City; 9 in Philadelphia; 2 each in Boston, Cincinnati, and Detroit; and 1 each in Providence, New Haven, and Milwaukee.

Diphtheria.—There has been no very marked variation in the number of deaths reported from this disease in any one place for a number of weeks past. The mortality in New York City, Boston, and Brooklyn, still maintains a high rate per cent. The deaths were as follows: New York City, 35; Philadelphia, 12; Boston, 8; and Detroit, 2.

Scarlet Fever.—Scarlet fever continues prevalent in New York City, Brooklyn, and Hudson Co., N. J. Elsewhere there is reported no excessive mortality from this cause. The deaths for the week, so far as reported, were as follows: New York City, 76; Philadelphia, 6; Boston, 1; Cincinnati and Milwaukee each 2; and Detroit, 1.

Typhoid and Typhus Fevers.—There were 5 deaths from typhoid fever in New York City; 19 in Philadelphia; 3 each in Boston and Wilmington, Del.; 2 each in Cincinnati, Milwaukee, and Portland; and 1 each in New Haven, Indianapolis, Davenport, and Jacksonville. In Philadelphia this disease has prevailed to a considerable extent all winter, and the mortality still continues unusually great. Three deaths occured from typhus in New York City.

Malarial Fever.—There is nothing special to report under this head for the past week.

Measles and Whooping-cough.—A remarkable falling off in the deaths from measles is noticed in New York City, where the number was only 8, as compared with 29 and 33 in the two preceding weeks. Elsewhere there are only few deaths reported from this disease. The only city in which whooping-cough prevails to any considerable extent is New York. The deaths for the week were 20, against 13 and 18 for the two preceding weeks.

Consumption and Pneumonia.—The gradual decrease in the deaths from both of these diseases noted in the early part of the month, and which is characteristic of this season of the year, has been interrupted, and in a number of instances during the past week the mortality has exhibited a decided increase. This increase in mortality happening subsequent to, and coincident with, an unusually prolonged spell of cold and damp weather, would seem to indicate the relationship of cause and effect. From consumption there were 116 deaths in New York City, an unusually high mortality, even in the most unfavorable season. There were 62 deaths in Philadelphia, against 48 in the preceding week; 29 in Boston; 15 in Cincinnati; 7 in Providence; 8 in New Haven; 11 in Louisville; 6 in Detroit; 5 in Portland, and 6 in Milwaukee. From pneumonia there were 97 deaths in New York City; 43 in Philadelphia; 28 in Boston; 7 each in Cincinnati and Detroit; 4 in Providence; 5 in New Haven, and 3 in Louisville.

Health in Michigan.—For the week ending April 15, 1882, the health reports indicate that remittent fever, dysentery, cholera morbus, membranous croup, and puerperal fever have increased, and that inflammation of bowels has decreased in area of prevalence. Small-pox was reported present during the week ending April 15, and since, at three places as follows: At Flint (one case), Manistee (four cases among the Poles), and at Plainwall, Allegan County (one case), April 15, 1882.

Alabama Medical Association.—The annual meeting of the Medical Association of Alabama was held in Mobile, Ala., on April 12, 13, and 14, J. B. Gaston, M.D., of Montgomery, President, in the chair.

The first day's proceedings were occupied with the address of welcome by Dr. W. H. Sanders, and the address of the President, Dr. J. B. Gaston, of Montgomery. Dr. Gaston's address dealt principally with the present ineffective supervision of the sanitary conditions of public institutions by the State Board of Health, and suggested that the general assembly be memorialized to give the Medical Association joint supervisory functions with the various county boards of health,

On April 13 papers were read by Dr. Godfrey, of Somerville, on Rabies in Alabama; Dr. Heustis, of Mobile, on Recent Progress in Surgery, and by Dr. Jordan, of Birmingham, on Epidemic Typhoid Fever.

The following officers were elected for the ensuing year: *President*, Clifford D. Parke, of Selma; *Vice-Presidents*, John M. Godfrey, of Sumterville; Daniel O. Hopping, of Letohatchee; *Secretary*, Thomas A. Means, Montgomery; *Treasurer*, Walter C. Jackson;

Board of Censors, for 5 years, J. S. Weatherly, Montgomery; John R. Hoffman, Athens.

Medical College Commencements.—The Forty-eighth Annual Commencement of the Medical Department of the University of Louisiana was held on March 29, the degree of Doctor of Medicine was conferred on 56 candidates.

The Missouri Medical College graduated a class of 125 at its Annual Commencement.

The St. Louis Medical College conferred degrees of Doctor of Medicine on 29 candidates at its commencement in March.

At the Annual Commencement of McGill University, Montreal, held on the 31st of March, the degree of Doctor of Medicine was granted to 27 graduates.

The Eleventh Medical Convocation for conferring degrees in medicine by the University of Bishop's College, Montreal, was held on the 5th of April, 9 degrees of C.M., M.D., being conferred.

At the Commencement of the Rush Medical College honorary degrees were conferred on J. Milner Fothergill, of London, and Giovanni Paladino, of Naples.

Mütter Lectures—College of Physicians of Philadelphia.—Dr. E. O. Shakespeare has begun a course of ten Mütter Lectures on "Contributions to the Histology of Inflammation." Three of the lectures were delivered this week. The remaining lectures will be delivered to-night and on May 2, 5, 6, 8, 9, and 12. The lectures are free to members of the profession.

Royal College of Physicians of London.—At the meeting of the Royal College of Physicians of London held April 3, Sir Wm. Jenner, the retiring President, was unanimously re-elected to the presidency.

The Paris Faculty.—Dr. Cornil has been elected to the Chair of Pathological Anatomy in the Faculté de Médecine of Paris, in place of Prof. Charcot. Prof. Cornil has consequently resigned his post of Deputy for Allier in the Chamber of Deputies.

Murder of an Asylum Physician.—On Friday morning, January 6, Dr. Edward A. Adams, first Assistant Physician at the State Asylum for the Insane, Kalamazoo, Mich., was fatally stabbed by a patient in that institution.

Louisiana State Medical Society.—Owing to the disastrous floods which have caused so much destruction in Louisiana, the meeting of the Louisiana State Medical Society, which was to have been held on March 29, has been postponed indefinitely.

The Académie des Sciences.—The Section of Medicine and Surgery of the French Académie des Sciences presented the following list of names as nominees for the place made vacant by the death of Bouillaud: 1st, M. Davaine; 2d, M. Charcot; 3d and *ex aequo*, MM. Paul Bert and Brown-Séquard; 4th, M. Sappey. The contest lay between M. Davaine and Paul Bert, the latter being elected on April 3 by thirty votes to twenty for Davaine.

Meeting of the Association of Medical Superintendents of American Institutions for the Insane.—The thirty-sixth annual meeting will be held at the Grand Hotel in Cincinnati, Ohio, on Tuesday, May 30, 1882.

The First Congress of German Physicians and Hospital Directors will be held at Wiesbaden on the 20th, 21st and 22d of April. On the first day Dr. Leyden, of Berlin, will open the discussion on the pathology of Bright's disease, and on the second Dr. Liebermeister on the antipyretic methods of treatment. The congress will be opened by Prof. Frerichs.

The Philadelphia County Medical Society and the New York Code.—At the stated meeting of the Philadelphia County Medical Society, held April 19, 1882, the following resolutions were adopted:

Resolved, That this Society reaffirm its adherence to the principles of the Code of Ethics of the American Medical Association, and declares that, in its opinion, for a physician to extend professional recognition to irregular practitioners, is to patronize and encourage irregular practice. and is alike inconsistent with honesty of purpose and the pursuit of medicine as a science.

Resolved, That this resolution be referred to the Pennsylvania State Medical Society at its next annual meeting.

The Medical Association of the State of Alabama and the New York Code.—At the late meeting of the Alabama Medical Association the following resolutions were adopted:

Resolved, (1) That the Medical Association of the State of Alabama learns with regret the recent action of the Medical Society of the State of New York in the adoption of a Code of Ethics which authorizes, on the part of its members, consultations with irregular practitioners of medicine.

(2) That this Association, believing that such consultations cannot prove otherwise than mischievous to the best interests of the regular profession of medicine, and demoralizing to all regular physicians who countenance them, hereby renews its allegiance to the ancient practices of the profession, and to the established Code of Medical Ethics in this country, by both of which all professional association, of whatever sort, with irregulars is condemned.

The St. Louis Medical Society and the New York Code.—At a meeting of the St. Louis Medical Society, held April 1, 1882, the following resolutions were adopted:

Resolved, That the St. Louis Medical Society, while it desires to accord the broadest freedom to medical investigations and recognizes fully the right of individuals to form and hold private opinions, hereby declares that it regards with disfavor any steps taken to lessen or obliterate the distinctions and safeguards between an honorable practice of medicine founded upon science and that founded upon any of the current delusions and exclusive medical systems of the day.

Resolved, That a copy of this resolution be forwarded by the Corresponding Secretary to the New York State Medical Society, to the Permanent Secretary of the American Medical Association and to several specified medical journals.

The Homœopathic Society and the New York Code.—At the regular stated meeting of the Homœopathic Medical Society of Lancaster Co., Pa., held last week, the following resolution was unanimously adopted:

Resolved, That it is the sense of this meeting that since the practice of homœopathy has established for itself an honorable position in the estimation of the community against all the opposing forces that the old school could bring to bear against it, that there is no advantage or prestige to be derived by homœopathic physicians in consulting with allopaths, and therefore the recent action of the Allopathic Medical Society of the State of New York—in resolving in future to consult with them—was entirely gratuitous.

An Unnoticed Feature of the New Code.—*The Chicago Medical Journal and Examiner* points out a very important clause in the New York Code, which, strangely enough, has hitherto escaped the notice of the many wondering eyes which have perused that now famous document. *The Chicago Journal* points out that "the third deviation from the National Code is embraced in the following paragraph: 'In case of acute, dangerous, or obscure illness, the consulting physician should continue his visits at such intervals as may be deemed necessary by the patient or his friends, by *him*, or by the attending physician.' Here is a latitude given for the continued attendance of a consulting physician after having once been called, which should certainly satisfy the most aggressive consultant in New York, or elsewhere.

"He is not to be guided in the repetition of his visits by the request of the attending physician, as has been hitherto deemed honorable and just; nor yet by the request of the patient or his friends; but he is to go as often as his own judgment, ambition, or avarice may dictate. It would be difficult to construct a rule more unjust to the attending physician, more open to the grossest abuses, or better calculated to deter the attending physician from suggesting council in the first instance."

Verily their Committee builded better than the Society knew.

What is said of the New York Code of Ethics.

We are enjoying the proud distinction of being the only journal that has assumed the responsibility of being outspoken on this question. We are consequently more than ever emboldened to say that, despite the adverse comments of medical journals, despite the denunciatory resolutions of State societies, despite the anathemas of medical orators, the Medical Society of the State of New York is perfectly right in the stand it has taken, and that it must not back down in any particular.—*The Medical Record*, April 22, 1882.

Most unwise, ill-timed, and injurious both to the interests of the profession and of the community. . . . . Untenable in every aspect in which it can be viewed, and is not sustained by the action of any other respectable body of medical men in Europe or America.—*The Chicago Medical Journal and Examiner.*

Practically, it gathers all medical adventurers and medical pretenders into its arms, and calls this liberality.—*The Detroit Lancet.*

From the profession of almost every State and section, as reflected by the medical journals, come the earnest protests against the attempted innovation of the New York State Medical Society upon the code of ethics. Some of the comments are extremely vigorous and some even caustic. The unanimity of opinion, however, is remarkable. . . . . It gives us renewed faith in the honor and integrity of the profession.—*Atlanta Medical Register.*

Yesterday homœopathy was a delusion. It was a gigantic fraud—in short, a lie. All the big noodles of the allopathic school swore by the big horn spoon, and all the little noodles repeated the oath, that the system called homœopathy was a monstrous lie. . . . To-day has come, bringing with it a remarkable change. Homœopathy is no longer a lie. . . . To-day homœopathy in the main is true enough, and there is no objection to any one practising it if they see fit.—*The Medical Advance* (Homœopathic).

Death of the Subject of the first Porro-Cæsarean Operation in Europe.—Giulia Cavallini, upon whom Prof. Porro, of Pavia, performed the initial operation which bears his name, on May 21, 1876, died of typhoid fever after nine days' sickness at Gambolo, on September 25, 1881. Although but a few miles distant, no word was sent of her sickness to Prof. Porro; and he was not aware of her death until too late to secure an autopsy, which would have been of great interest to the medical profession throughout the world. Giulia was thirty years old at the time of her death: she was a comely little woman of four feet ten and one-quarter inches in height; and her pelvis which was deformed by rickets was computed to have a conjugate of one nine-sixteenth inches. The favorable result in her case was largely due to the fact that she was less than seven hours in labor, and had been in hospital prior to its commencement, where steps had been taken in anticipation of the event.

The Society of the White Cross.—A society has been formed in Austria, called the Society of the White Cross, to aid in the labors of the Red Cross Society by providing and superintending convalescent homes in healthy places for invalided and wounded soldiers.

OBITUARY.

Died, on April 20, Charles Robert Darwin, LL.D., F.R.S., the celebrated English scientist and philosopher.

Mr. Darwin was one of the most distinguished students and scholars of the day, and his name is probably more widely known, and his opinions more generally studied, than those of any other English-speaking scholar. He was born at Shrewsbury, England, February 12, 1809, his father being Dr. Robert Waring Darwin, F.R.S., and his grandfather the celebrated Dr. Erasmus Darwin, F.R.S., the author of "Zoönomia," the "Botanic Garden," "Temple of Nature," etc.

Mr. Charles Darwin was educated first at the Shrewsbury Grammar School, then at the University of Edinburg in 1825 and 1826, and next at Christ College, Cambridge, where he received the degree of B. A. in 1832, and M.A. in 1837. His reputation as a naturalist was first obtained by his report on the scientific expedition of the "Adventure" and "Beagle," in 1826–30, and again in 1831–36. In addition to numerous papers on scientific subjects, Mr. Darwin wrote "The Structure and Distribution of Coral Reefs," which passed through two editions,; "Geological Observations on Volcanic Islands," and "Geological Observations on South America."

The most important of all his writings is his "Origin of Species by Means of Natural Selection," published in 1859, in which the outline of the now famous doctrine of evolution, or as it is familiarly termed, "Darwinism," was established. It is only recently that the controversy awakened by his bold and ingenious arguments has ceased, while their effects on the whole line of scientific thought is unparalleled. His "Origin of Species" has passed through several editions in England, and been translated into French, German, Spanish, Italian, and other European languages.

Mr. Darwin's more recent works had for their object the supplying of data on which he founded his conclusions. A "Treatise on the Fertilization of Orchids," was published in 1862, and was followed in 1867 by "Domesticated Animals and Cultivated Plants, or the Principles of Inheritance," etc. In 1871, he published his "Descent of Man and Selection in Relation to Sex;" in 1872, "The Expression of the Emotions in Man and Animals," "Movements and Habits of Climbing Plants," second edition, 1875; "Insectivorous Plants," 1875; "Cross- and Self-fertilization in the Vegetable Kingdom," 1876; and "Different Forms of Flowers, in Plants of the Same Species," 1877. Mr. Darwin, who had been elected a member of various English

and other scientific bodies, had received from the Royal Society the Royal and Copley Medals for his various scientific works, and from the London Geological Society the Wollaston Palladin medal. He was created a Knight of the Order *Pour le Mèrite*, by the Prussian Government, and in June 1871, he was elected a corresponding member of the Academy of Vienna. The University of Leyden conferred upon him the honorary degree of M.D. in February, 1875, and the University of Cambridge gave him the honorary degree of LL.D., November 17, 1877. He was elected a corresponding member of the French Academy of Sciences in August, 1878.

—— On January 31st, at Mt. Pleasant, Iowa, Dr. MARK RANNEY, Superintendent of the Iowa Hospital for the Insane, in the 56th year of his age.

—— At his residence in New Orleans, on March 20, BENJAMIN STILLÉ, M.D., formerly of Philadelphia, in the 68th year of his age.

NOTES AND QUERIES.

PRACTICAL NOTES.

To the Editor of THE MEDICAL NEWS.

Sir: You will oblige me very much if you will answer me the following questions in the next issue of your paper:

In the treatment of syphilis by hypodermic injections of albuminate of mercury, as mentioned in your paper of to-day, how many times a week ought the injections to be made?

A patient with the opium habit, takes from two to two and one-half grains of morphia, hypodermically, per day. Is it safe for him to leave the habit off all at once, and what symptoms would follow in that case?

Will solutions of muriate of apomorphia or muriate of pilocarpina keep for any length of time?

Which American work, or foreign work adapted to American practice, is the best authority on skin diseases?

In answering these questions you will very much oblige,

Yours, truly, A SUBSCRIBER.

CINCINNATI, April 18.

[1. The mercurial injections are given daily, on alternate days, and twice a week, according to case. 2. The habit can be discontinued at once, but great depression, almost callapse, ensues. 3. Both undergo change rapidly, and should be made when required. 4. Duhring, American, and Fox, English.—ED.]

HYPODERMIC INJECTIONS FOR CURE OF SCROFULOUS CERVICAL GLAND.

Subscriber asks: What is the latest experience in using hypodermic injections for the radical cure of scrofulous glands in the neck? What injection is the best? What percentage of cases has been benefited?

Billroth and Czerny both report cures of lymphadenoma by injections of Fowler's solution into enlarged glands—from five to twenty drops daily. The usual material for strumous glands is the tincture of iodine. Cures are certainly constantly effected, but we do not know of any exact statistics bearing on the question of the relative number.

VACCINE CONES.

To the Editor of THE MEDICAL NEWS.

Sir: Seeing our name mentioned in special article "On Vaccine" in the issue of THE MEDICAL NEWS of April 22, 1882, and as it does not justly state the facts as far as we are concerned, we respectfully request that you will permit us to explain.

1. The article alludes only to the cones made by the N. E. V. Co., creating the impression (with those not familiar with their virus) that they make it in no other form. This is an error, as they make and sell more on ivory points than any other way, and these are considered the purest form of vaccine, and are equal to the best that can be produced, and better than most in the market, as is proven by the great satisfaction they have given the medical profession. We have sold nearly 100,000 ourselves during the past winter.

2. The cones have never been spoken of by ourselves, nor do the N. E. Vaccine Co. recommend them as equal to points, but have always represented them as a *pure* form of crust, and are preferred by many practitioners to the points. We have sold hundreds of these cones during the past winter, and the many unsolicited letters of recommendation received by us of their reliability and efficiency, assure us they *are not* spurious mixtures, as some interested parties have represented them to be.

We have visited, from time to time, the establishments of the N. E. Vaccine Co., to keep ourselves fully acquainted with their mode of propagating and collecting virus, and are satisfied no more skill or care can be exercised than they use.

Respectfully, H. C. BLAIR'S SONS.

PHILADELPHIA, April 24.

[The statements made in the article referred to, so far as Messrs. Henry C. Blair's Sons are concerned, were simply that they are the agents of the "New England Vaccine Company," and that they sold us the cone which we examined, neither of which they deny; so that their grievance is not evident.

The specific matters upon which their letter dwells relate to the "N. E. V. Co." and not to them. In reply to these, however, it is proper to say that:

1. We did not imply that the "N. E. V. Co." does not deal in points, on the contrary we distinctly said that it is stated that Dr. Cutler manages to charge three or four times more *points* from a single heifer than any other propagator.

2. The cones are advertised as "consolidated lymph . . . . entirely free from any trace of pus, débris, or epidermis," which does not correspond with the characteristics of a "crust."

The letters of recommendation which were shown to us by Mr. Blair, were in response to their own notes of inquiry, and most of them spoke of the points and not of the cones. Mr. Blair can scarcely expect the public to accept as unbiassed his opinion of the management of a business of which he is a commercial agent, particularly in the face of the impressions given by a peremptory refusal to permit an inspection of the company's premises by a competent and properly accredited physician.—ED.]

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 18 TO APRIL 24, 1882.

GREENLEAF, CHAS. B., *Major and Surgeon.*—In accordance with par. 12, S. O. 78, C. S., from Headquarters of the Army, relieved from duty in this department.—*S. O. 57, Department of Dakota, April 11, 1882.*

GARDNER, W. H., *Captain and Assistant Surgeon.*—His assignment to duty at Fort McKavett, to relieve Surgeon Waters, revoked, and to report to the commanding officer Fort Davies, Texas, for duty as Post Surgeon.—*S. O. 38, Department of Texas, April 14, 1882.*

LAUDERDALE, J. V., *Captain and Assistant Surgeon.*—Par. 1, S. O. 47, C. S., from these headquarters, in regard to him, revoked, and he will proceed to Fort Sully, Dakota Territory, and report to the commanding officer of that post for duty.—*S. O. 59, Department of Dakota, April 13, 1882.*

BROWN, P. R., *Captain and Assistant Surgeon.*—To be relieved from duty in Department of Texas, on receipt of this order, to proceed to New York City, and, on arrival, report by letter to the Surgeon-General.—*S. O. 88, A. G. O., April 17, 1882.*

FINLEY, J. A., *Captain and Assistant Surgeon.*—Relieved from duty at Fort Concho, Texas, and assigned to duty as Post Surgeon at Fort McKavett, Texas, relieving Surgeon Waters.—*S. O. 38, C. S., Department of Texas.*

KILBOURNE, H. S., *Captain and Assistant Surgeon.*—Having reported in person at these headquarters, will proceed to Fort Shaw, Montana Territory, and report to the commanding officer of that post for duty.—*S. O. 60, Department of Dakota, April 14, 1882.*

SHUFELDT, R. W., *Captain and Assistant Surgeon.*—Granted leave of absence for three months from May 1, 1882, and relieved from duty in Surgeon-General's Office from May 1, 1882, and, upon expiration of leave, to report by letter to Surgeon-General.—*S. O. 92, A. G. O., April 21, 1882.*

DAVIS, WM. B., *Captain and Assistant Surgeon.*—So much of par. 12, S. O. 78, April 5, 1882, from A. G. O., as directs him to report for duty to the commanding general Department of the Platte, is amended as to direct him to report in person for duty to the commanding general Department of Dakota.—*S. O. 87, A. G. O., April 15, 1882.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XL. SATURDAY, MAY 6, 1882. No. 18.

ORIGINAL LECTURES.

MÜTTER LECTURES.

ON THE HISTOLOGY OF INFLAMMATION.

Delivered before the College of Physicians of Philadelphia, April 24 to May 2, 1882.

BY E. O. SHAKESPEARE, M.D.

ABSTRACT OF LECTURES I.-V.

INFLAMMATION IN THE CORNEA.

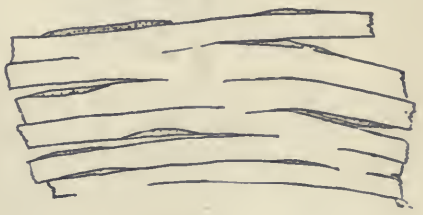
GENTLEMEN: Having been appointed to deliver here a series of ten lectures upon some subject relating to surgical pathology, I have chosen that of the "Histology of Inflammation" for two reasons. 1. Because of its importance, if we would learn the changes which actually occur in inflamed tissues; 2. Because, notwithstanding the researches of many distinguished investigators, there is still much to learn concerning the minute processes of inflammation. The great champion of the activities and functions of the white blood-corpuscle, Cohnheim, in one of his monographs on inflammation of the cornea, very truly says that "too little is known of the anatomy of the cornea to permit of a final settlement of this question."

In taking up, again, inflammation of the cornea, it is useless to proceed with the pathological histology of this tissue, before first knowing something of its real normal histology, and the same remark applies to the pathological histology of every other type of living tissue. Hence the necessity of prefacing what I shall have to say of inflammation in the different tissues to which I shall invite your attention, by a short account of my understanding of their normal structure. In doing so, I shall dwell only upon points where a divergence exists from views generally accepted.

With regard to the cornea, I am compelled to dissent, in many respects, from prevalent opinions concerning the simplicity of its structure. Taking up the subject seriatim, I have nought to say concerning the anterior epithelium, except that this layer rests upon a layer of flat endothelial cell-plates which separates it from the basement membrane of Bowman, which latter, I am inclined to suspect, like other basement membranes beneath epithelial investments, is constituted in part, at least, of old elastic endothelial cell-plates. This basement membrane is separated from the substantia propria of the cornea by another endothelial layer, more or less complete, which in some places seems to be double, thus constituting lymph passages which assume the outline of a network. With regard to the nerves I have nothing to state, except that their lymph-sheath is occasionally in communication with adjoining lymph-spaces in the substance of the cornea, nor have I anything to say concerning the membrane of Descemet.

As to the structure of the substance of the cornea, included between the anterior membrane of Bowman and the posterior membrane of Descemet, my investigations lead me to coincide in many respects with Thin, and in consequence to depart from the teachings of Rollet, Klein, Cohnheim, Stricker, and others, in some important particulars. I admit the fibrous nature of the substantia propria as a condition existing in life and health, but I see three usual arrangements of the fibres. Rollet speaks of the possibility, after the action of the permanganate of potash, of resolving the bundles of fibres ordinarily seen, into their ultimate fibrillæ; and others, as well as he, speak of the arrangement of the bundles of fibres side by side so as to form sheets, which are familiarly known as the lamellæ of the cornea, of which the whole thickness of the cornea affords a considerable number. I have been able to satisfy myself of the existence of an intermediate arrangement of the ultimate fibrillæ into small bundles or bands having a thickness from one-tenth to one-quarter that of the bundles ordinarily seen; they have a breadth about equal to the diameter of a red blood-corpuscle of man. Fig. 1 indicates such a constitution of an ordinary bundle, and shows most distinctly the existence of small intermediate bundles in the cornea of a kitten. The same arrangement exists in other cornea.

FIG. 1.



$\times \frac{600}{1}$

Furthermore, as to the arrangement of the ordinary bundles side by side to form a lamella or fibrous membrane. I have repeatedly seen both in the young and adult cornea, when normal as when slightly irritated, proof that there is frequently an intermediate arrangement between the ordinary bundles and the broad continuous lamellæ. There are bands or ribbons formed by ordinary bundles placed side by side. It is these bands or bundles which form the lamellæ. Sometimes they pass from one lamella to another, and often are composed of three or more thicknesses of lamellæ.

Now, as to the *cells* of the *cornea*. The prevalent belief is that they are of two kinds: the fixed cell, or stellate corneal corpuscle; and the wandering cell, or lymph corpuscle. I am convinced that there are at least four forms of cellular elements, and perhaps a fifth, which are constantly met with in the normal cornea, if proper methods are used for their demonstration.

One of which elementary forms is the leucocyte or lymph corpuscle, and need not be further discussed, except to say that these cells are met with in the lymph channels.

We return to the intermediate bundles, above mentioned as constituting the ordinary bundle of fibres. Upon and partly enwrapping these intermediate bundles, from point to point, in their course, are delicate cells, which, when seen in profile, appear like small spindles applied to the surface of the small bundle; some of them are actual spindles, while others are somewhat broadened plates which partly envelop the bundle (see Fig. 1). The existence of these cells has escaped the observation of nearly all investigators. Thin, I think, was perhaps the first to appreciate their significance. The direction of the spindles is, of course, parallel with that of the fibres. The ordinary bundles are, at intervals, partially invested with a form of flat

cell, which much resembles the tendon cell of Ranvier, and experiences analogous modifications in advancing from young to adult tissue. I recognize these cells as one form of the so-called corneal corpuscle; and there is strong reason to believe that the bands or ribbons of bundles are covered with a more or less complete investment of a single layer of endothelial plates, like that which limits the secondary bundles of tendon.

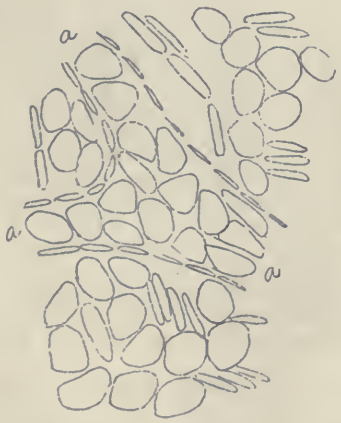
Fig. 2 represents an endothelial covering of a lamella in the cornea of a young kitten. I have been able, under favorable circumstances, to demonstrate the existence of similar endothelial layers between lamellæ in the normal adult cornea.

FIG. 2.

$\times \frac{250}{1}$

Fig. 3 shows, upon a lamella in the depth of the cornea of an ox, the effect of a solution of caustic potash in revealing the existence of the endothelial cells which line the sheath of a nerve (*a*), as also that of the endothelial cells covering the adjacent fibrous substance, and of the spindle cells above described.

FIG. 3.



$\times \frac{200}{1}$

As to the corneal corpuscle, so called, I have nothing to advance beyond the statement that it seems to be a living, contractile entity, of the nature and somewhat of the form of the ordinary connective tissue corpuscle, and to more or less completely fill a lymph space, which is necessarily more or less stellate, and in some instances seems to be a channel hollowed out of the semifluid, interfibrous cement substance; in other instances, merely a space left by imperfect apposition of bundles of fibres, whether they be those formed by the ordinary bundles constituting the bands, or by the bands and lamellæ themselves.

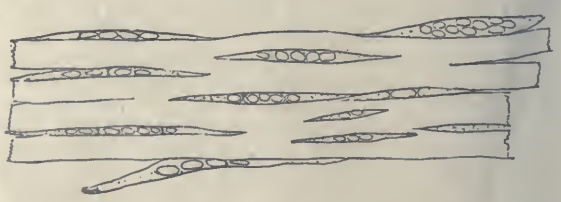
We now come to the consideration of the *effects of inflammation in this structure*. I shall ask your attention only to what takes place in a healthy reparatory inflammation, after a slight traumatism. Whether the animal selected for experiment be a frog, a cat, or a rabbit, the phenomena to be observed in a few hours are much the same. The method of exciting inflammation chiefly used was that of gently touching the centre of the exposed cornea with the point of a crayon of caustic potash or soda, and afterwards washing the eye. I should state in the beginning that most of the experiments were made in winter. The stick of lunar caustic was sometimes used, as also the white-hot needle, to produce the wound. At the end of three, twelve, twenty-four, forty-eight, or seventy-two hours, the cornea was treated with lunar caustic, either mitigated or of full strength, during the life of the animal; after the lapse of twenty minutes to three-quarters of an hour, the animal was killed, and the eye immediately removed and placed in slightly acidulated water, and exposed to light. At the end of one or two days, it was removed, the cornea excised, and split into thin lamellæ, or cut into thin sections, or otherwise treated. The sections were mounted in glycerine, and again exposed to light. Some pieces were teased with needles and stained in carmine.

Other preparations were made with osmic acid, with gold, and with various reagents. Examination of the earlier preparations showed, in the neighborhood of the injury, the presence of numbers of spindle cells, quite distinct, most of which had no visible connection with the so-called corneal corpuscles, which latter could be demonstrated at the same time as showing no other change other than that of multiplication of the nucleus and thickening of the processes. These spindle cells followed the course of the ordinary bundles of fibres, and frequently two, three, four, or more nuclei were visible in them, and they corresponded in position to the locations of the spindle cells existing in normal tissue.

Those intermediate bundles, which were not separated from each other by spindle cells, were, nevertheless, for the most part quite distinct and well shown.

The number of lymph corpuscles was not yet abnormal in this region, and the periphery of the cornea was not invaded by them, nor did this portion of it show signs of inflammation other than the slightest œdema (see Figs. 4 and 5).

FIG. 4.



$\times \frac{600}{1}$

At the end of forty-eight hours the appearances first noted were more marked; the spindle cells were more numerous, a long spindle had sometimes divided once or twice, and the stellate corpuscles in some places were still visible as before, and in much the same condition, except the number of their nuclei was greater, and sometimes the whole body of the corpuscle appeared to have divided into two. In other places, however, the location of the corpuscle was occupied by a more or less broad network in the place of the corpuscle, formed by polygonal, flat, endothelioid cells, with multiplying nuclei, and in some of these nets at the nodal point the remains of the stellate corpuscle could still be recognized upon or beneath the flat cells. In other spots more or less broad areas of the field were occu-

pied by similar endothelioid cells in a state of proliferation, but no networks, and still the remains of the corneal corpuscles were even now sometimes visible in addition, and were undoubtedly multiplying. Besides these elements, lymph corpuscles were intermingled with all in numbers considerably increased beyond normal, but yet far from constituting an abundant purulent infiltration. At the same time, in some preparations, especially those which showed but few of the endothelial cells, the limb of the cornea offered scarcely any more signs of inflammation than the first example.

Fig. 5.

× 400/1

In some older preparations, the inflammatory process gradually subsided, without an infiltration from the border of the cornea taking place. In others the injury had been sufficient to cause, when the animal lived long enough, a very abundant cell formation, and purulent infiltration, producing a mass of embryonal cells, in which neither the stellate corpuscles, nor the spindle cells, nor the endothelial cells, could be recognized as such.

From a study of these preparations in the light of the above advanced normal structure of the cornea, I am of the opinion that a slight injury of the cornea can be, and frequently is, repaired by the agency of the cellular elements normally in the tissue near the place of injury, and without any other assistance from the adjacent bloodvessels than an additional supply of blood plasma, and that the repair takes place by slight inflammation, through the stimulated activity of the spindle cells and the endothelium, as well as of the few lymph corpuscles normally present, as also of the stellate cells. I, therefore, most positively believe in the activity of the fixed cells of this tissue in the processes of destruction and repair, and at the same time admit as much for the lymphatic.

INFLAMMATION IN CARTILAGE.

Still pursuing the plan of introducing the pathological histology of the tissues in inflammation by a study of their normal constitution, I invite your attention to my understanding of the minute structure of the cartilages. These tissues have usually been described as presenting three main types, differing from one another in several particulars—hyaline cartilage, elastic or reticular cartilage, and fibro-cartilage. I will not review present opinions concerning the structure of the cartilages, further than by saying that hyaline cartilage is believed to consist of the usual more or less globular cartilage cell enveloped by a capsule, and imbedded in a ground substance or intercellular matrix, which is commonly homogeneous or structureless; that in reticular cartilage there is the addition in the intercellular matrix of branching fibres, which resemble more or less closely elastic fibres in other locations; and that in the fibro-cartilages the intercellular matrix is occupied by bundles of common white fibrous tissue.

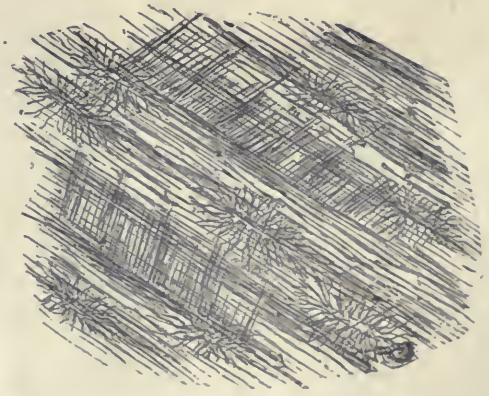
Returning to the hyaline cartilages, I desire to say to you that some of the writers of the last century entertained more correct ideas of the minute structure of this variety of cartilage when it covers the articulations, than do most authors of this day and generation, notwithstanding their improved microscopes and methods of study. I wish to say in the most positive terms that the hyaline cartilages covering the diarthrodial joints, as well as in most other locations, possess a ground substance or intercellular matrix, which in health is as decidedly fibrous in constitution as is that of the lamellæ between the bone-corpuscles of the osseous tissues.

The fibrous structure of the matrix of hyaline cartilage is ordinarily masked by an inter-fibrous cement substance, which has such a consistence as to ordinarily prevent the separation of the fibrillæ by mechanical means, and which in health possesses an index of refraction so nearly approaching that of the fibres as to cause it to be nearly impossible to distinguish the outlines of the fibres.

But there are certain methods of examination by which healthy hyaline cartilage can be shown to present the structure of fibrous tissue as it is found in other locations in the animal economy.

Various substances which have the power, by maceration, to soften and dissolve the interfibrillar cement of other fibrous tissues, and resolve the larger fibrous bundles into their ultimate fibrillæ, have the same potency when acting upon cartilage, although in a much lessened degree. With cartilage, more time, more patience, more perseverance, are required than with other tissues, if we would succeed in unravelling its intimate structure. Maceration in lime water, in baryta water, in permanganate of potash, in salt solution, will frequently demonstrate the fibrous nature of the intercellular matrix of cartilage. Treatment of thin sections of fresh cartilage by solutions of osmic acid, of chromic acid, will sometimes succeed in revealing, more or less completely, their fibrous structure. Spina recommends one of the most certain means of caus-

Fig. 6.



× 400/1

ing it to appear: The cartilage is to be plunged, when perfectly fresh, into very strong alcohol, where it is to remain for three or four days. At the end of this time thin sections are to be made while the tissue is still wet with the alcohol, and are to be examined under the

microscope while they are immersed in the same fluid. The alcohol should be absolute.

Figure 6 represents very inadequately the appearance of such sections under a power of four hundred diameters. These cuts included the substance of the cartilage upon the knee of an ox, and were from the middle portion of the thickness of the articular covering.

The prevalent direction of the fibrous bundles is well marked out, but the picture shows very distinctly the existence of some bundles which have been cut across more or less obliquely, and which observe a different course.

A striation of these fibrous bundles parallel with the direction of the latter, just as prevails in the bundles of other fibrous tissues, is quite definite. I wish to call your attention particularly to the bodies covered with innumerable delicate spines, which radiate from the surface of these bodies in every direction, and which, in some instances, can easily be seen to form a communication between adjacent bodies. Sometimes the intercommunicating spines fill the whole space of the field existing between the bodies, and in that case the straight fibrous bundles are so covered as to be with difficulty recognized. These bodies are the cartilage-cells, and they occupy the same relation to the bundles of fibres as that already indicated for the stellate cells of the cornea relative to the ordinary fibrous bundles of that tissue, and are the analogues of the connective tissue corpuscle of other tissues.

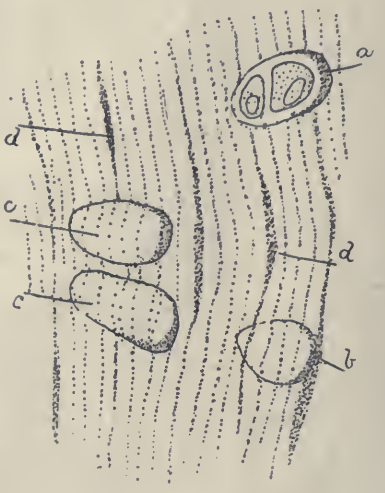
FIG. 7.

$\times \frac{400}{1}$

Figure 7 reproduces a sketch from a section through the cartilage of the condyles of the humerus of a young kitten. The knife passed parallel with the long axis of the bone, and the cut is therefore vertical to the surface of the cartilage. The preparation was made in the following manner. The joint was opened and the articular surface rubbed over gently two or three times by a stick of nitrate of silver. The animal was allowed to live for an hour, then killed. Immediately sections were made from the cartilage in the direction mentioned. These were mounted in glycerine and exposed to light. The action of the silver was found to have penetrated to varying depths and in varying intensities. The picture shows the marking seen a short distance below the surface. It is noticeable that the cartilage cells are not invaded by these lines, and that they rest upon the substance stained.

Figure 8 is from a knee-joint of another kitten, whose cartilage was treated in a similar manner. But the cut was made in the depth of the cartilage and transverse to the long axis of the bone. These sketches very poorly represent the beauty and clearness for demonstration of these and similar preparations. The magnifying power used in both was 400 diameters. In Fig. 8, as in Fig. 7, the field is marked out by the linear deposits of the silver, and the distance apart of the lines is quite similar in the two instances. There is a marked difference between the two sections in one or two particulars.

FIG. 8.



$\times \frac{400}{1}$

At somewhat regular intervals the linear bands or bundles are grouped together into larger bundles, which include three, four, or more of the smaller bundles. These larger bundles are separated from each other by a more extensive and distinct silver deposit, and at certain distances along the surface of these larger bundles are seen indications of cells of considerable size, which give a spindle-form profile (*d*, Fig. 8). In one of the spaces for the cartilage corpuscle (*a*) the cells are present and quite distinctly shown. In the others they have fallen out of the space in which they probably existed, the section being extremely thin.

At *c* are two such spaces, which are empty. You observe that in these the smaller bundles can be seen to dip down and follow the curve of the floor of the space.

While discussing this figure, I wish to ask your attention to the crescentic deposit of silver (*b*) at one side of the wall of the space. Its significance I will speak of further on, when we reach the consideration of the nature of the so-called cartilage cells.

As a result of my observations upon hyaline cartilage, a few of which I have related, as well as of the published researches of a few investigators who have lately studied this tissue anew, I think I am fully warranted in claiming for the fibrous tissue, which normally constitutes it, an arrangement very analogous to that of other fibrous tissues.

Where the surface of the cartilage is covered with perichondrium, it is found that in the superficial portion of the cartilage the fibres of the matrix preserve an arrangement in the main very similar to that found in the perichondrium itself. That is to say, there are layers in which the fibres are more or less completely parallel with the surface of the perichondrium, and with each other, while the layer next above or below will have its fibres running in an opposite direction, but in the main still parallel with the surface. At the same time, just as in the perichondrium and in the periosteum, there are in hyaline cartilage also bands or bundles of fibres which dip down and enter, or pierce and continue on into the depth of the cartilage. The ultimate fibrillæ of the intercellular matrix, as in the

cornea, are grouped together in smaller bundles, which correspond to the small primary bundles of the cornea.

These primary bundles are marked out distinctly in Fig. 7. They are, I believe, more or less completely covered with small, flat, or spindle-shaped cell plates, just as was described for the cornea, although this is most difficult of demonstration ordinarily. Between them are the same linear spaces, as described for the cornea, which may be filled entirely by the peculiar cement substance of the matrix of the cartilage, or form the most minute radicles of the lymphatic system, which some investigators have succeeded in marking out by injections (Arnold among others), and which are the places of deposit of the minute particles of lime in calcareous degenerations.

These primary bundles are themselves grouped into larger or secondary bundles, which correspond to the ordinary bundles of the white fibrous tissue of authors. Their extent and relations are suggested in Figure 8, at *d*. By the crossing or linear apposition of such larger bundles, spaces of considerable size and varying shape are left. It is here that the so-called cartilage corpuscle, or its remains, is frequently to be found. The shape of the space in which the cell rests is consequently influenced by the direction of the fibrous bundles where it is located. It is true more especially where no capsule exists.

At the surface of articular cartilages, the prevalent direction of the bundles of fibres is that of parallelism with the surface. In the depth of the cartilage the bundles have a prevalent direction vertical to the surface. Between these two there is a portion of the thickness of the cartilage where the fibres form an intricate network or feltwork of transition from the one to the other, in which there can be said to be no prevalent course for the bundles.

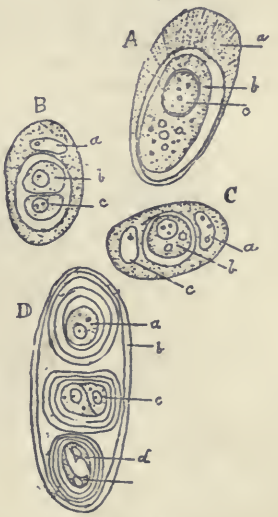
Thin has affirmed the existence in hyaline cartilage of layers more or less complete of endothelial cell plates which divide the larger fibrous bundles into lamellæ or membranous layers. I have so far been unable to see indication of such an arrangement in the cartilages, except in two instances, where I found the familiar silver markings in the depth of the hyaline cartilage of the head of the tibia in a young kitten. Whether such a thing usually exists I am, from my own observations, unable at present to affirm or deny.

Now, as to the question of the so-called *cartilage cell*. I am warranted in stating, with the same degree of positiveness with which I have spoken of the fibrous nature of the so-called "homogeneous, structureless, inter-cellular matrix of hyaline cartilage," that the cartilage cell known to authors is almost a perfect analogue of the connective tissue corpuscle found in ordinary fibrous tissues, as to its shape, its formation, and the morphological changes which it may undergo. In its history and evolutions and similarities, it is closely comparable with the fat vesicle on the one hand, and on the other hand with the connective tissue corpuscle, which, according to Klein, by a process of vacuolation and endogenous cell formation, gives rise to new lymph spaces, lymph capillaries, and lymph cells.

There are facts in the histology of the cartilages which, when rightly appreciated, are strongly suggestive of the true nature of these cartilage cells. I refer to the presence in the reticular cartilages of many animals, as a normal condition, of typical fat-cells, side by side with typical cartilage cells, while the same preparation in different places shows the familiar metamorphoses of both; to the normal presence of fat globules in many cartilage cells, and to the frequent transition, at the ossifying layer, of the cartilage cell into the fat vesicle of the medullary tissue.

Figure 9 shows a few of the changes which the cartilage cell frequently appears to have undergone. At *A* is represented a cartilage cell (*c*) of the hyaline matrix, of which the capsule (*a*) has apparently been recently formed, and consequently still preserves some of the indications of its constitution. The objects in this figure were seen under a magnification of 400 diameters. The edge of the cell is not quite in contact with the inner surface of the capsule: consequently, a space (*b*) remains, which may be called a pericellular lymph space. It does not always exist here, since frequently the outer surface of the cell is in contact with the capsule. Note that the capsule presents, in optical section, the outlines of a seal ring; and that in the thickened portion of this ring there is a striation of the substance of the capsule, radiating more or less accurately from the centre of the ring. Sometimes I have seen the continuation of these delicate lines from the inner surface of the capsule to the surface of the enclosed cell, which itself is frequently seen to consist of a network, or, more properly, a *feltwork* of minute fibres. On the other hand, I have occasionally observed the lines to extend outward, beyond the limits of the capsule, into the matrix, appearances which harmonize well with those of the cartilage corpuscles under alcohol, and with the striation of the capsule shown by the injections of Arnold and others.

FIG. 9.



× 400

At *B*, same figure, is a capsule still retaining the remains of a nucleus (*a*) in the thickened portion, and within which are two cartilage cells (*b*, *c*). At *C*, same figure, is an endogenous cell of the connective tissue of the mesentery of the rabbit, at the edge of a growing lymph nodule. The drawing presents an example of endogenous cell formation affecting the connective tissue corpuscle; *a* and *c* are two nuclei at either end of the elongated cell; at *b* is a fully formed cell within the body of the larger one.

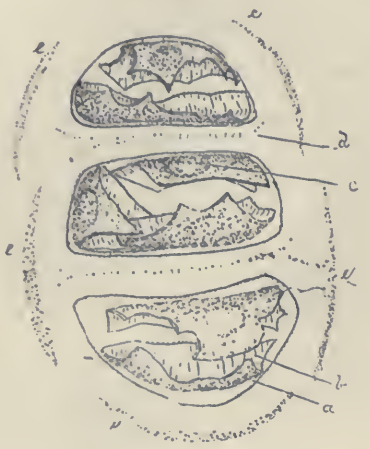
Figure 10 shows an elongated row of cartilage cells in the depth of the articular cartilage of the head of the femur of a kitten, after treatment with the solid silver salt in the manner already indicated.

Each of the so-called daughter capsules or spaces is occupied by two or more flat cells, with more or less irregular edges. They curve around the walls of the space in which they rest.

The outer surface (*a*) of these flat endothelioid cells shows a granular or linear constitution and takes the silver staining, while their inner surface (*b*) generally does not, unless the effect of this agent has been

very intense. A little outside the limit of the present capsule of each space are the remains of bodies (*e*) which have taken the silver staining in the same manner as has the external surface (*a*) of the flat cells in the spaces. I regard them as cross sections of the fossil remains of similar flat cells which once lined the inner surface of the mother capsule, whence descended the three series of cells constituting the row of cartilage cells here delineated.

FIG. 10.



$\times \frac{800}{1}$

The appearances shown in Fig. 10 are regular and almost uniform, for the vertical rows of cells in the articular cartilages, and a similar constitution is the rule even in other portions of the cartilage, where there do not yet seem to be daughter cells. Occasionally the spaces are completely filled by a cell which, if located elsewhere, could not be distinguished from a fat vesicle, and frequently cells or capsules are met with where its centre is either markedly encroached upon or completely occupied by a projection of the solid wall, thus greatly narrowing, or even entirely obliterating the space which the cartilage cells in part line.

What bearing does all this have upon the familiar appearances of cells in hyaline cartilage, and the variations which they offer?

That the capsules are produced by a senile change of the flat endothelioid elastic cell-plates which line the lymph cavities in which they rest. In other words, that the capsule is formed of one or more of such transformed elastic cell-plates; that it represents the protoplasmic envelope of a cell which has experienced changes similar to those of fat cells or of the connective tissue cells of Klein above alluded to, and has given birth to one or more endogenous cells with identical functions and tendencies. Like this cell of Klein, the protoplasmic envelope before, or instead of, suffering transformation at once into a capsule, may divide into two or more endothelioid plates, which may finally undergo vitrifaction into capsule. In this manner cells within cells and capsules within capsules can be formed, and, further, every trace of them be covered up or masked by senile changes into vitrified elastic cell-plates and by encroachment upon the lymph spaces in the way above suggested.

One more point, and I have done with the normal histology of this variety of cartilage.

From this endogenous cell formation, it may result at any stage that the centre of the lymph space is occupied by a *lymph corpuscle* which may remain indefinitely as a lymph corpuscle without evincing any further tendency to the above evolutions. In this case the cell occupying the lymph space within the capsule really possesses a spheroid form.

With regard to the other cartilages, I have nothing further to add, beyond the statement that they are constructed upon the same general plan of fibrous or elastic tissues, to which, aside from the peculiar consistence which gives them the name of cartilage, they are so closely related.

As to the lymphatics of cartilage, I must admit, in the main, the descriptions of Arnold. The so-called cartilage cells lie in lymph spaces, which are in communication with each other and with the lymphatics of the perichondrium, on the one hand, and with those of the medullary spaces in the lines of ossification, on the other hand, through extremely minute channels which penetrate the cartilage capsules, and pervade the intercellular fibrous matrix. These channels are so minute that the lymph currents are extremely sluggish, and the lymph corpuscle in its entirety cannot pass through them. Whether they in life are occupied by extremely delicate filamentous processes or branches of the protoplasm of the cartilage corpuscle, as Elsberg and some others believe, I cannot tell. Such an hypothesis comes within the limits of possibility.

Gentlemen, I have thus minutely examined before you the normal histology of the cartilages because I deemed a thorough appreciation of their physiological conditions absolutely essential to a reasonable understanding of the processes by which the well-known pathological appearances in this tissue are brought about.

It is not necessary in these enlightened times for me to attempt to prove to you that a bona fide *inflammation* attacks non-vascular tissues, such as cartilage, although there are a few who yet delight in antique dogmas, and teach that where there are no blood-vessels there can be no *redness*, and *consequently* no inflammation.

What are the changes which inflammation induces in cartilage? It will be sufficient if we restrict this inquiry to the articular cartilages of movable joints, for the pathological alterations of this variety of tissue furnish a key to those wrought in the other varieties.

Being so far removed from a direct vascular supply, and having lymph channels which are so minute, the active changes, which injury inaugurates in the more vital non-vascular structures, are not so quickly developed in hyaline cartilage.

An acute arthritis affecting a diarthrodial joint, whether it is brought about by a direct traumatism which involves the cartilage, or is induced in the course of rheumatism, causes certain alterations in the structure of the cartilage, which must be recognized as the work of the inflammatory process. Not to speak here of the alterations in the synovial membranes, the following order of phenomena are usually observed in the cartilage: The spaces in the superficial layers, which normally contain only one, sometimes two, flattened, often blanched cells, lose the fat which they usually in some quantity contain, experience the cloudy swelling, a division of their nuclei, followed by division of the cell body and the production of daughter cells. At the same time the original lymph space changes shape somewhat by lengthening and widening, till it nearly approaches a spherical form. Meanwhile, the intercellular substance begins to reveal, by softening and alteration of the cement substance of the matrix, its real fibrous nature. If the irritation has been slight, and the succeeding inflammation correspondingly slow, the new daughter cells in the superficial spaces may form around them capsules in the manner indicated above, and if the irritation now cease the matrix

will return more or less completely to its apparently structureless state.

But if the inflammation continue or grow intense, the proliferation of the cartilage cells becomes too rapid for the generation of capsules around the newly formed cells. The cells must derive the pabulum necessary for their growth and activity from the adjacent matrix. The fibrous bundles are more and more loosened and softened until, at length, they become separated, and at various points have free extremities floating in the synovia of the articular surface. Primary capsules, containing broods of daughter cells, either surrounded by secondary capsules or remaining in direct contact, thus become emptied into the articular cavity. Frequently the primary capsule, if at first present, disappears in the softening process which affects the matrix, and its space is filled with a collection of cells which have become embryonal, and are undistinguishable from lymph corpuscles.

This process may be limited to the superficial layers, or may, in varying degrees, affect the deeper layers. But the chief difference is that, where the inflammation affects only the superficial, the separated and partially detached shreds of fibrous matrix are more or less parallel with the surface, whilst, on the contrary, if these layers are destroyed by the inflammatory process, and the deeper layers have become involved, the direction of the intercellular fibrous bundles is more or less vertical, circumstances which are readily understood if we revert to what has been said of the direction of the fibrous bundles of the normal matrix.

Oftentimes, in quite active inflammation, the cells of some primary capsules proliferate so rapidly that the intervening matrix is eaten away; adjacent spaces thus become fused, and their young cells mingled to form masses of embryonal tissue, which enlarge at the periphery by the continuation of the same agencies. In this manner, spots of the hyaline cartilage may be more or less completely transformed into connective tissue, or be eroded and totally destroyed. This is most frequently the case with portions of the cartilage most remote from the vascular supply, where the over-stimulated cells must necessarily derive the increased pabulum rapidly required to support their increased activity almost entirely by preying on the surrounding material. On the other hand, in those portions in the neighborhood of the vessels, unless the inflammatory action be quite intense, the tendency is to such a mild degree of growth and proliferation of the cellular elements, that hypertrophies or ecchondroses, instead of destruction, frequently result.

It is thus that in chronic rheumatic arthritis we often see new formation at the periphery of the cartilages, while at the centre we have destruction of the old tissue.

In cartilage of this kind we have a tissue in which the processes of destruction and repair must of necessity act, at least in some of the stages, almost, if not quite exclusively, through the agency of the cells belonging to the tissue itself. Inwandering cells are in the earlier stages out of the question. Aside from the necessities of the case, the cartilage cells can be seen to show the most indubitable evidences of proliferation, of a return to the potent embryonal state when there is no possible means of distinguishing them from the lymph cell of the blood, for which so exclusive a rôle has been claimed, beyond their isolated location. The same changes and activities which have been well nigh established for the connective tissue cell in the connective tissues so called, especially those which cover the peritoneum, can be followed out most perfectly in the endothelioid cells of cartilage, and under circumstances which make it next to impossible for the inwandering lymph cells or white blood corpuscles to interfere.

I therefore feel justified in claiming also for hyaline cartilage, as for the cornea, an exceedingly active and potent agency, in the reparatory as well as in the destructive inflammations which attack it, for all the fixed cells of this structure; and in denying any participation on the part of inwandering cells, in some cases from the beginning to the end of the disturbance of nutrition, in other cases until after the inflammatory processes have wrought great changes of structure.

ORIGINAL ARTICLES.

CASES OF UNUSUALLY HIGH DEGREE OF ACCOMMODATIVE SPASM; MYOPIA SIMULATED BY HYPERMETROPIC EYES.

BY GEORGE C. HARLAN, M.D.,
SURGEON TO WILLS' EYE HOSPITAL, AND TO THE EYE AND EAR DEPARTMENT OF THE PENNSYLVANIA HOSPITAL, PHILADELPHIA.

SOME recent communications in the MEDICAL NEWS (Nos. 4, 5, and 8) revive the much-discussed question of hypermetropia in children, and may give a passing interest to the report of cases bearing upon the subject. We are met at the threshold of this discussion by the discouraging fact that there is no agreement as to what hypermetropia really is, or, at any rate, as to what degree of it is worth considering and by what standard it is to be estimated. Some of the best observers, following Donders, insist that an allowance should be made for the "tone" of the accommodation, and claim that no degree of hypermetropia within that allowance, which is unfortunately indefinite, should be considered. Donders says, "slight degrees of hypermetropia are in youth not even to be proved, much less to be reduced to their numerical value; indeed whenever a deficiency of refractive power exists in the eye, when in a state of absolute rest, it is supplied by the accommodation; and even if the eye, in paralysis of accommodation should be emmetropic, the tone of the accommodation alone effects a slight degree of myopia. Consequently, the actually emmetropic vision requires, in a certain sense, a minimum of hypermetropia, and that minimum is capable of no accurate determination, because to the tone itself a certain latitude, perhaps from $\frac{1}{100}$ to $\frac{1}{40}$, must be allowed.

"In this sense, and it is the only practically sound one, the majority of eyes of young persons are undoubtedly emmetropic." That is, they have a low degree of hypermetropia which is rendered latent by the accommodation and will appear as "acquired hypermetropia" at the age when accommodation ceases to be a factor.

It is true that, in hair-splitting accuracy, such a thing as emmetropia can not be said to exist, except as an unattainable ideal standard; but as we occasionally meet with patients who, in response to all our usual tests, have full vision which is not sharpened by the weakest concave glass before atropinization, or by the weakest convex glass after it, and as we have no means of determining where tone of the ciliary muscle ends and tonic spasm begins, may it not be better to eliminate the variable element of accommodation, and draw the line at mathematical emmetropia, considering all on one

side of it hypermetropia and on the other side myopia?

The question is further complicated, in addition to the powerful accommodation, by the high degree of retinal sensitiveness of the youthful eye, and the varying degree of mental quickness of children in recognizing letters with greater or less circles of diffusion, and no test of their refraction can be more than a rather rough approximation without atropia. Though either the test by glasses and letters or that by the ophthalmoscope often gives positive knowledge of the presence of hypermetropia without the use of a mydriatic, neither can be depended upon, in the case of young subjects, in proof of its absence. Dr. Loring, who of all men in this country, is not to be suspected of underrating the value of the ophthalmoscope, says, "candor compels me to declare that I can not consider the instrument as accurate a test as that by glasses." However this may be with older people, it is more than doubtful in the case of children, who are much more likely to relax their powerful and sensitive ciliary muscles under ophthalmoscopic examination than in endeavoring to distinguish the letters of the test types.

It was not my intention, however, to discuss this subject, but merely to give a few illustrations of what the ciliary muscle is capable of doing as a disturbing element in statistics of refraction. The simulation of a moderate amount of myopia by a hypermetropic eye, or the conversion of a low degree of apparent myopic astigmatism into hypermetropic astigmatism of the opposite meridian by atropia, is a matter of daily experience with every ophthalmic surgeon. Myopic astigmatism may even be simulated by an emmetropic eye, a refractive anomaly, the mechanism of which is not easily understood as it supposes a partial action of the ciliary muscle. The following cases offer nothing at all unusual in kind, and are interesting only on account of the high degree of accommodative spasm.

CASE I.—Must be the confession of one of my own mistakes, which has been a source of no little mortification. A school girl, eleven years of age, in good health, complained of short sight, the inconvenience of which was felt chiefly in reading music. Vision was $\frac{20}{40}$ and with $-\frac{1}{24}$ was brought to $\frac{20}{15}$. Ophthalmoscopic examination confirmed the diagnosis made by test types and glasses; $-\frac{1}{24}$ was ordered for music and the result was considered by all concerned as highly satisfactory. Nearly four years afterwards the patient called again, and the following note was made, "has worn $-\frac{1}{24}$ for music only; has noticed in the last year that distant vision is not so good and that she has a tendency to stoop in reading—no asthenopia but some pain back of balls lately, which she thinks is not evidently connected with use of eyes." Vision was in the right eye $\frac{20}{70}$, brought with $-\frac{1}{7}$ to $\frac{20?}{30}$; in the left $\frac{20}{70}$, $\left(\frac{20?}{50}\right)$ brought with $-\frac{1}{10}$ to $\frac{20?}{30}$. By the ophthalmoscope $-\frac{1}{48}$ was diagnosticated in the right eye and emmetropia in the left. Atropia revealed a hypermetropia of $\frac{1}{36}$ in the right eye and $\frac{1}{48}$ in the left, and correction gave full vision.

CASE II.—Imposes the less unpleasant task of recording the mistake of a widely known ophthalmic surgeon of another city. It is that of a young lady of sixteen years, who stated that she had always been short-sighted, but had grown worse of late. Three years ago concave glasses had been ordered for her, which she had not with her, but which, from comparison with those of her father, who is myopic, must have been about $-\frac{1}{12}$. She had struggled on, reading sometimes without glasses, sometimes with her own, and sometimes with her father's, but always painfully. She had suffered much from frontal headache, and on numerous occasions it had been necessary to take her from school for periods of complete rest. In the right eye vision was $\frac{20}{50}$, brought by $-\frac{1}{7}$ to $\frac{20}{30}$; in the left $\frac{20}{64}$, brought by $-\frac{1}{8}$ to $\frac{20}{30}$. The ophthalmoscope showed emmetropia in both. After complete atropinization, a hypermetropia of $\frac{1}{18}$ was found in the right eye and of $\frac{1}{16}$ in the left, and these glasses gave $\frac{20?}{20}$. $+\frac{1}{16}$ was ordered for the right eye and $+\frac{1}{18}$ for the left. She wore these constantly, and the asthenopia and headache entirely disappeared.

CASE III.—A rather delicate and nervous girl of thirteen, stated that she had always been short-sighted, but had grown worse of late. Vision in each eye was $\frac{20}{100}$, brought to $\frac{20}{20}$ by $-\frac{1}{8}$. By the ophthalmoscope the myopia was estimated at $-\frac{1}{48}$. Atropinization revealed a hypermetropia of $\frac{1}{42}$.

An interesting point in all these cases is that the apparent myopia was not the result of a mere temporary spasm from disturbed innervation, but was continuous for years; in fact, seems to have been a permanent condition during the life of the patients.

COLLATERAL CIRCULATION IN A CASE OF CIRRHOSIS OF THE LIVER.

BY R. B. MOWRY, M.D.,
OF ALLEGHENY, PA.

THE following case is of such rare occurrence as to entitle it to a place on record:

On January 7, 1881, I was invited, in consultation with Dr. F., to see Mrs. K., a married woman, aged forty-eight, the mother of nine children. Menstruation had ceased four years previously, and she had had good health until some time in the summer before, when her abdomen began to enlarge. She was attended by Dr. H. Enlargement of the abdomen increased; ascites was diagnosed; and on November 5, 1881, she was tapped, and a large quantity of fluid was drawn off. Her abdomen soon began to fill up. She became dissatisfied with her attending physician, and Dr. F. was called in, who invited me to see her with him.

At this time she was quite emaciated; tongue clean; appetite good; bowels acting normally; urine very scant, and red from a small quantity of

blood; no semblance of jaundice; on the contrary, conjunctiva perfectly clear; heart's action normal; lungs normal; the abdomen enormously distended; no œdema. Her husband testified that she always seemed to eat with a good appetite. She had no particular pain, and suffered only from the discomfort of the abdominal distention.

Her general health seeming so good, and as we could not examine the liver in her present condition, our diagnosis was between ascites and cystic dropsy. Percussion did not elicit resonance in any position, except along the posterior sides of the abdomen and the epigastric region; but there was an umbilical opening, about two inches and a half in diameter, from which protruded a translucent tumor. We supposed that it might be a mixed case, with enough fluid in the cavity of the peritoneum to produce the protrusion.

After a few days we were compelled to tap, both to relieve the great distension, and clear the diagnosis. Three and one-half gallons of straw-colored fluid were drawn off. We could then feel distinctly the hard and rather sharp border of the left lobe of the liver projecting somewhat below the ribs, and also that there was some induration of the right lobe to be felt under the cartilages; on percussion, dulness did not extend above the normal line.

Thus was confirmed ascites from obstructed portal circulation, and this obstruction from indurated liver, and because this woman had been a habitual beer drinker for many years (never drank distilled liquors), it was most likely cirrhosis. About this time Dr. F. was taken sick, and the case was left entirely under my care.

From February 3 until October 11, inclusive, she was tapped twenty-six times, making in all twenty-nine times. In the meantime her lower limbs had become very œdematous, the œdema extending over the abdomen, thickening the parietes so much as to make tapping a painful operation.

I then began to use a small trocar through the umbilical opening, which, contrary to my fears, answered a good purpose; the thin covering of that part, instead of ulcerating and leaving a permanent opening, closed kindly and grew in toughness; so that at the present time the opening is closed with thick integuments, and very much resembles a large normal umbilicus.

The fluid evacuated at each tapping did not diminish much until the 6th of August, when it was considerably less, and slightly tinged with blood. From August 6 until October 11 she was tapped six times, the fluid continuously diminishing and the œdema becoming less; the urine increased and became more normal in character. The last two tappings were done at her urgent solicitation. Her mind had become fixed in the belief that her recovery depended on this operation, and it could be so easily performed through the umbilical opening that I was fearful, if I did not gratify her, she might herself make an opening.

At this date, April 6, there is no sign of ascites, œdema entirely gone, legs quite thin, appetite good, urine normal in quantity and quality.

Her skin had been dry and furfuraceous; the scalp very much so; but with the application of a liniment, of which cod-liver oil formed the principal ingredient, her skin has greatly improved. She sleeps pretty well, and attends somewhat to her household duties, and believes herself to be getting well in spite of the doctor's grave prognosis.

The interest of this case is altogether in the wonderful provision of nature, in affording relief by setting up collateral circulation. Such cases are spoken of in systematic treatises on diseases of the liver as of very rare occurrence.

Frerichs says, "After the disease (cirrhosis) is fully developed, the termination is always unfavorable. The complete destruction of the glandular substance cannot be repaired in any way; and it is only under favorable circumstances that the collateral channels compensate for the obstructed circulation through the portal vein. It is possible—yea, probable—that by this last means the functional derangements compromising life may be relieved, and that in the slighter forms of hepatic degeneration a cure, though imperfect, may ensue."

It is not necessary to explain how this collateral circulation may be established; any one who will take the trouble to examine the anatomy of the venous system will find that it is both internal and external.

HOSPITAL NOTES.

BOSTON CITY HOSPITAL.

(Service of GEORGE W. GAY, M.D.)

BULLET-WOUND OF NECK—TRACHEOTOMY—HÆMORRHAGE FROM THE VERTEBRAL ARTERY—DEATH.

(Reported by ROYAL WHITMAN, Surgical Interne.)

THE patient, a Chinaman, having attempted suicide by shooting himself in the mouth, was brought to the hospital March 24, 1882.

Examination showed the point of entrance of the bullet in the median line of the dorsum of the tongue, about one inch from the tip. The probe could be passed in a direction downwards and backwards for about one inch. The tissues of the inside of the mouth were blackened with powder, and the clothing about the neck was saturated with blood. The patient was perfectly calm and answered questions intelligently, and did not appear to be suffering from shock.

During the next few days there was much induration and tenderness about the left side of the neck, accompanied with considerable pain. There was also inability to move the left shoulder or arm, probably from injury to the brachial plexus; otherwise he was in good condition.

On the 30th inst. the patient did not appear to be as well, and the induration being more localized, the Visiting Surgeon (Dr. Geo. W. Gay) decided to make an attempt to extract the ball.

The patient was etherized and turned upon his right side. An incision was then made about three inches in length, commencing at about one and one-half inch to the left of the atlas, and extending downwards in the line of the sterno-mastoid muscle. The dissection was continued inward, coming directly upon the bullet, which was lying in the tissues immediately above the transverse process of the third cervical vertebra, and it was extracted.

It was then noticed that the patient was becoming cyanotic and the breathing, which was superficial in character, entirely ceased. The jaws were forced open, the tongue drawn forward, subcutaneous injections of

brandy and ether given, and artificial respiration performed without effect. Dr. Gay then immediately performed tracheotomy, and inserted a large silver catheter into the trachea. Upon blowing through this, a large quantity of blood, which had collected in the lungs, was ejected. The lower extremities were then elevated, allowing the blood to run out. The lungs were then regularly inflated, in connection with the artificial respiration which had been continued. The patient then commenced to breathe and the pulse returned. A large trachea-tube was inserted, and the original incision in the neck was explored. Several small spiculæ of bone were extracted, and at the bottom of the wound a larger loose fragment appeared. This was carefully extracted with forceps, but its removal was followed by a profuse gush of arterial blood, evidently from the vertebral artery.

The wound was tightly packed with sponges, which controlled the hæmorrhage. Taking into consideration the position of the wound, the swelling of the tissues of the neck, the presence of a tube in the trachea, and the exhausted condition, ligature of the vertebral artery was postponed.

The patient was placed in bed and a current of hot steam was passed constantly across the opening in the trachea. The tube was removed in twenty-four hours, and for the two succeeding days the patient was very comfortable, taking nourishment well. The sponge-packing was soaked with carbolic solution, and did not appear to inconvenience the patient.

On April 3 he developed symptoms of an acute bronchitis, and pleuritic friction sounds were heard on the left side. April 4 the patient was much worse; respiration rapid and gasping; temperature, 107.8°; failed rapidly, and died during the A. M.

Autopsy twenty-eight hours after death: At the base of the tongue, about three inches from the point of entrance, was the point of exit of the ball. It had then passed across the pharynx, and, striking the body of the third cervical vertebra, had glanced and completely shattered the transverse process, obliterating the vertebral canal. There were thromboses in the vertebral artery and vein, which had been injured by the bullet. There was some infiltration of pus in the pre-vertebral tissues; also an acute bronchitis, and an acute pleurisy on the left side, these affections being apparently the direct cause of death.

Remarks.—This case is interesting for the following reasons:

1st. A bullet shattering the vertebral canal and injuring the vertebral vessels, not followed by immediate hæmorrhage, which, if it had occurred, would have caused death, as it would have been impossible to discover its source.

2d. Internal hæmorrhage occurring during the administration of ether, with collection of blood in the lungs, causing cessation of respiration and extreme cyanosis, and from which death would have resulted but for the rigorous measures adopted.

3d. The violent external hæmorrhage following the removal of a portion of the transverse process, completely controlled by sponge-pressure.

MEDICAL PROGRESS.

THE RELATIONS OF BIZZOZERO'S CORPUSCLE TO COAGULATION OF THE BLOOD.—DR. FANO has found numbers of the corpuscles described by Prof. Bizzozero in blood prevented from coagulation by the injection of peptones. Peptonized blood will coagulate when treated with water or carbonic acid, and the process may be readily watched under the microscope. When the plasma of peptonized blood is separated from the red corpuscles, numbers of Bizzozero's corpuscles, as well as the white cells, are readily detected, and when examined under a high power, after dilution with water, in about half an hour a fibrous network gradually forms from star-like points, whose rays form the network, while their body is composed either of Bizzozero's corpuscles, or, more often, of the white blood cells. When peptonized blood is allowed to coagulate by diluting it with water, and then examined, numerous heaps of unaltered *plättchen* are found, having no connection with the fibrinous network. When peptonized plasma was allowed to stand without any addition, for two or three days in a cold room, very often a very small clot would form, few *plättchen*, but numerous white corpuscles still remaining in the plasma. When this plasma was diluted or treated with carbonic acid, it still was able to form a clot, evidently due to the leucocytes, which was much larger than the one which formed spontaneously. When lymph containing no *plättchen*, and not spontaneously coagulable, is drawn from peptonized dogs, it still will coagulate on the addition of water, or by treating with carbonic acid. Dr. Fano believes, that although the connection of the *plättchen* with coagulation cannot be denied, they exert a much weaker influence than the white blood-corpuscles.—*Centralb. f. d. Med. Wissen.*, March 25, 1882.

FRAUDULENT SUBSTITUTE FOR GLYCERINE.—In the *Union Médicale et Scientifique du Nord-Est*, for March, 1882, Prof. LAJOUX points out a fraudulent substitute for glycerine which has been introduced into the French market. The ordinary physical characters of the liquid closely resemble a fine specimen of glycerine; it, however, has a bitter taste, due to an impure sulphate of magnesium, and contains glucose. Quantitative analysis showed that the preparation was simply a saturated solution of sulphate of magnesium, with one hundred and sixty grammes of glucose to the litre, to disguise the taste of the salt.

TREATMENT OF DIPHTHERITIC CONJUNCTIVITIS.—VOSSIUS, *Klin. Monatsbl. f. Augenheilk.*, November, 1881, recommends the employment of salicylic acid dissolved in glycerine (four per cent.) as a local application. A case of diphtheria of the conjunctiva, associated with the same condition of the fauces, was rescued by its means from an apparently hopeless state, after aqueous solutions of carbolic, salicylic, and boracic acids had been used without benefit. The glycerine solution was painted on the conjunctival surfaces every half hour; an immediate reduction of the swelling of the lids and the chemosis set in, and a large ulcer, which threatened total destruction of the cornea, healed.

Bose, of Giessen, had obtained marked success with this remedy in the treatment of diphtheria of the throat and of wounds.—*Ophthalmic Review*, April, 1882.

HOW TO DISTINGUISH SALIVA-SPOTS IN CLOTHING FROM OTHERS OF SIMILAR APPEARANCE.—Dr. CERVERA (*Cron. Med.-Quir. de la Hab.*) gives a simple mode of distinguishing salivary stains from spermatic and others of similar appearance with which they may be confounded. This distinction is often of importance in medico-legal cases. The piece of cloth containing the spot is by capillarity moistened with a saturated solution of ferric chloride; chemical reaction will give rise to a blood-red color in the case of saliva, but not in stains due to other fluids. Parotid saliva, especially after meals, contains the sulpho-cyanide of potassium, a substance which strikes an intense red color in contact with ferric salts, although these may be present only in minute quantity. Such reaction does not take place in the case of pus, nasal or vaginal mucus, spermatic or gonorrhœal fluid.—*Druggists' Circular and Chem. Gaz.*, April, 1882.

Limited Atrophy of the Heart.—O. Hjelt relates, in *Finskaläkaresällsk. Handl.*, Band xxii. (*Nord. Med. Archiv*, Band xiii., Häft 4), the case of a man aged seventy-nine, who, about four and a half months before his death, began to complain of pain in the chest. From this time, there was increasing dyspnœa, and at the same time the legs first and then the whole body began to swell. On his admission into hospital, the heart's beat was irregular; the sounds were weak, but clear; the pulse was small, soft, about eighty; the urine was dark in color, scanty, and slightly albuminous. At the necropsy, the heart was found to be fifteen centimetres (about six inches) long and sixteen centimetres broad, semilunar in form, with an obtuse apex, formed of both ventricles. The left ventricle was large; its muscular structure in front had an uniform pale-brown color, and was two and a half centimetres (one inch) thick; on the other hand, the posterior and upper part of the ventricular wall was only one centimetre thick, and was pervaded by firm grayish-white bands of connective tissue, which almost entirely replaced the muscular structure, and projected internally in the form of a firm network surrounding the delicate trabeculæ. The pericardium at this part was thickened. The posterior papillary muscles were small and atrophied; the anterior were large. The chordæ tendineæ were of usual thickness. The left auriculo-ventricular orifice was somewhat dilated, and the mitral valve was thickened at the apex. The aortic and semilunar valves were normal. The right ventricle was also dilated, and its wall thickened. The valves were normal. The left coronary artery was sclerosed. The right coronary artery contained, about four centimetres (1.4 inch) from its origin, a firm, red, firmly adherent thrombus. —*London Med. Record*, March 15, 1882.

Cæsarean Section.—A successful case of Cæsarean section, after five days' labor, in a primipara aged forty-two, with a conjugate diameter of five centimetres is reported in the *Weekblad v. Geenerkunde*, No. 25, 1881. The abdominal wound was made in the linea alba, and extended from the navel to the mons veneris; the uterus and placenta were cut through and the living child extracted by the feet. After removal of the placenta, the profuse hæmorrhage soon ceased; on account of its rapid contraction, sutures of the uterus were not required. The abdominal wound was closed with carbolized silk sutures: perfect recovery without any reaction occurred in three weeks.—*Deutsche Med. Wochen.*, March 18, 1882.

Ante-partum Hour-glass Contraction of the Uterus.—From a careful study of this subject, Dr. Thos. C. Smith summarizes his results as follows:

1. A true "hour-glass" contraction of the body of the uterus, tetanoid in character, occurs during labor, and adds greatly to the difficulties and dangers of the parturient act.

2. In some cases this contraction may be felt through the abdominal wall, which fact should induce physicians to resort more frequently to abdominal palpation in labor cases.

3. Clinical facts demonstrate that the segment of the uterus below the stricture is in a relaxed condition, and only in exceptional cases is thinning thereof to be recognized.

4. Owing to the lack of harmony in the opinions of anatomists regarding the structure of the uterus and its cervix, hypotheses based upon assumed anatomical evidence, and unsupported by clinical observations, are not entitled to the weight of authority at this time. In this category are to be included the theories of Bandl and Hosmer.

5. The treatment of cases belonging to the class referred to in this paper must be determined by the special peculiarities belonging to each, until further observation and experience shall justify the formulation of a rule of general application; but it is proper to state that the performance of the Cæsarean operation does not seem to be justified because of the existence of the stricture *per se* for the reasons already given.—*Amer. Journ. of Obstet.*, April, 1882.

Unsuccessful Case of Extirpation of the Uterus by Abdominal Section for Cancer.—Dr. A. Reeves Jackson reports in the *Western Medical Reporter*, for April, 1882, a case of cancer of the uterus occurring in a woman aged thirty-four, for which Freund's operation of extirpation was performed. Death occurred on the sixth day from peritonitis, commencing apparently in the pelvis and extending to the abdomen. Extensive deposits of fresh lymph were found attaching the intestinal folds to each other, and the stump of the left broad ligament was gangrenous. A collection of sanious pus was also found in Douglas' *cul de sac* behind and below the vaginal opening—the latter being found at a higher point in the pelvis than it occupied at the close of the operation. The presence of this retained fluid, which amounted to more than an ounce, proved that, in some cases at least, drainage through the upper portion of the vagina is not of itself sufficiently complete in a patient lying on the back to be relied upon. It is possible that, had an efficient system of irrigation been adopted in this case, the result might have been more favorable.

Successful Case of Nephrectomy for Sarcoma.—At the meeting of the Royal Academy of Belgium, held January 28, 1882, M. Hicquet read notes of the following case of nephrectomy for sarcoma of the left kidney, occurring in a girl six years old. In February, 1880, pain in the left flank was complained of, and on examination a tumor of the size of a turkey's egg was detected. In spite of various modes of treatment this tumor continued to grow, and in August, 1881, it occupied the entire left hypochondriac region, and the entire left, and part of the right, ventral region, extending into the left iliac fossa. The tumor was ovoid, firm, resistent and smooth; it was diagnosticated as a sarcoma of the left kidney. The operation was performed on the 10th of September, under antiseptic precautions, the spray being omitted. The abdomen was opened, and the tumor exposed by an incision extending from the xiphoid cartilage to three fingers' breadth below the umbilicus. The parietal peritoneum covering the tumor was incised one centimetre to the outside of the transverse and descending colon, which passed in front of the diseased kidney, and the tumor enucleated and removed after double ligation of the ureter and renal artery and vein. A large drainage tube inserted in the wound and drawn out at the left flank served to carry the discharges outwardly. The patient left the hospital on October 16th, perfectly cured, and up to January 24th no symptoms of return of the disease had appeared.—*Journ. de Méd. de Paris*, March 4, 1882

Intra-cranial Circulation during Stoppage of the Heart.—M. Franck has made an experiment which completely destroys the classical theory of Richet, as to the function of the cephalo-rachidian fluid in cerebral anæmia, consequent to arrest of the heart. It is generally admitted that the cerebro-spinal fluid oscillates from the cerebral into the spinal cavity at each cardiac pulsation, occupying the cranium during cardiac diastole and flowing into the vertebral chambers when the cerebral vessels are distended during the cardiac systole. M. Franck placed an elastic ligature around the membranes of the upper

part of the spinal cord, and, the heart being stopped, he noticed after trepanning the skull, instead of a retraction of the brain, a sort of tumefaction with intense congestion of the veins and considerable blood pressure. Arterial anaemia, therefore, is accompanied by venous congestion. So the retraction of the cerebral bulk, produced by diminution in calibre of the arterioles, is compensated for by venous congestion, and not by the afflux of cerebro-spinal fluid.—*Progrès Méd.*, April 1, 1882.

EXTIRPATION OF THE UTERUS AND KIDNEY.—DR. STARCK, of Dantzig, reports a remarkable case of cancer of the uterus in a woman forty-two years old, in which total extirpation of the uterus was practised through the vagina. During the operation it was found that the right ureter was also involved in the disease, and a portion of it was excised. The upper end of the remaining portion of the ureter was too short to bring down to the vagina, and it was impossible to find its lumen so as to insert a canula to draw off the urine, it was therefore ligated, as it was concluded that there must be only slight functional activity in the right kidney, in order to give the patient a chance to recover from the shock of the first operation before submitting to the equally severe one of nephectomy. After six days, the right kidney was removed without difficulty through the lumbar incision, and at the end of three weeks the patient was discharged cured.—*Berliner klin. Woch.*, March 20, 1882.

CYST OF THE CRANIUM: CEREBRAL COMPRESSION: RELIEF BY OPERATION.—This case, reported by M. AUBERT, in the *Lyon Méd.*, No. 32, 1881, has a special interest from the influence which the cure of the cyst had on the intelligence of the patient, in consequence of the raising of the bony table. The cyst, about five centimetres in diameter, consecutive on a blow received upon the head twenty years previously, was situated in the lateral portion of the right frontal region, half in the hairy scalp, half in the free portion of the forehead. Opened by thermo-cautery, after an exploratory puncture, it gave issue to a yellow liquid containing crystals of cholesterin. The bed of the cyst was formed by a depressed bony wall. The wound was washed out with carbolic acid and dressed with boracic lint, and precautions were taken to delay union. The bony table rose by degrees, and, at the end of about two months and a half, it was at the same level as the frontal surface. From that moment the patient, who was a married woman about fifty years old, and had no memory at all for the ordinary occurrences of life, and was extremely negligent in all the cares of her household, rapidly became a careful, attentive housewife. This change was so marked and so sudden, as to be noticed by every one who was in the habit of seeing the patient.—*London Med. Record*, March 15, 1882.

TUBERCULOSIS OF THE EYELID.—At the meeting of the Société Médicale des Hopitaux, held on February 10, M. GÉRIN-ROSE presented a patient with tubercular granulations on the eyelid. He had a history of hæmoptysis, and had some time before received hospital treatment for the functional symptoms of phthisis, of which, however, no physical signs other than traces of tubercular laryingitis had been detected. He had lost a brother from tuberculosis. The patient, after an interval of good health, re-entered the hospital in last November; laryngoscopic examination showed the vocal cords tumefied, but not ulcerated. Fifteen days after admission, loss of resonance was detected at the left apex with arthritis of the left elbow-joint, probably tubercular in nature. The right eye also became red and inflamed, with profuse lachrymation, and on elevating the upper lid, it was seen to be the seat of ulcerative conjunctivitis and granulations of tuberculous nature.—*Bull. Gén de Therap.*, Feb. 28, 1882.

HOUR-GLASS UTERINE CONTRACTION TREATED WITH NITRITE OF AMYL.—DR. FANCOURT BARNES states that, on February 28, he was called to a patient with retained placenta. On his arrival, he found that the patient, a secundipara, aged twenty-two, had been delivered naturally at three o'clock in the morning of a living female child. The midwife stated that she sent for him, because she had been unable to deliver the placenta. On examination, he found that the umbilical cord had been separated from the placenta. The external os uteri was quite dilated, as was the cervical cavity; but the os internum and the circle of muscular fibres above it, called Bandi's ring, the chief seat of hour-glass contraction, were firmly contracted, and only admitted a finger, by which the placenta could be felt in the uterus. He then learned that the midwife, hoping to accelerate the third stage of labor, had given the patient a dose of ergot as soon as the child was born. He found it impossible to get his hand into the uterus to deliver the placenta. Bearing in mind the remarkable power which nitrite of amyl possesses in relaxing tension in the bloodvessels, he determined to test its action on the uterine spasm. The patient had three drops of the nitrite of amyl given her on a handkerchief to inhale, by Mr. Lingard. During the inhalation, the ring of muscular fibres round the os internum, which had been so rigid as to be absolutely undilatable, steadily yielded, until he could pass the whole hand into the uterus and detach the placenta, which was universally adherent. There was no hæmorrhage whatever, and the placenta itself presented a remarkably exsanguine appearance. —*Brit. Med. Journ.*, March 18, 1882.

IODOFORM IN OPHTHALMIA NEONATORUM.—Encouraged by the statements made at the Heidelberg Ophthalmological Congress, of the utility of iodoform ointment or powder in affections of the conjunctiva with profuse discharge, DR. LANGE, of the St. Petersburg Ophthalmic Institution, made trial of it in the treatment of ophthalmia neonatorum in six infants, employing at first no other means except water for cleansing the eyes, in order to be sure of the results obtained. These results were most unfavorable, so that other measures had to be adopted. Iodoform, in fact, is not only an application of no utility, but one attended with danger. This chiefly arises from the extraordinarily rapid growth of granulations, which speedily fill the conjunctival sac, and exert most injurious pressure on the cornea.—*Med. Times and Gaz.*, April 1, 1882, from *Petersb. Med. Woch.*, March 18.

OZONE AS AN ANÆSTHETIC.—The toxic effects of undiluted oxygen have long been known, and we now learn from the *Berlin. Med. Zeitung* that PROF. BINZ, of Bonn, has been experimenting on ozone produced by the silent discharge and mixed with air as an anæsthetic. The effect on small animals was very marked; the breathing, at first unquiet, became less frequent until a state of stupor was produced, but without any appreciable action on the heart. Pushed further, it caused considerable depression of the temperature and irritation of the air-passages, with vomiting. Human beings were variously affected, but sleep was generally obtained in from seven to twenty minutes, being preceded by greater ease in breathing. The sleep was deep, and followed by a sensation of weariness, lasting some minutes. Further experiments, however, showed that, though not so irritating as hitherto believed, it would be quite impossible to replace nitrous oxide by ozone as an anæsthetic.—*Med. Times and Gaz.*, April 1, 1882.

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REMOVAL OF THE UTERINE APPENDAGES.

WE can conceive of nothing more radical in the way of treatment than the removal of the uterine appendages for the relief of symptoms. It may be called the therapeutics of surgery, in which its aid is enlisted against functional, not organic, errors, thus giving to the surgeon a higher or lower relation to the art of medicine, according to the point from which it is viewed. It is customary, but not in the best of taste, to call the operation Battey's, and it is significant of the temperament of modern surgery, that Dr. Battey escaped some of the misfortunes of the pioneer. Surgery is now tolerant of everything new in the way of procedure, and for this surgery may thank gynecology. Operative gynecology has passed each barrier that has restricted traditional surgery until now it has invaded womanhood in its innermost place, and no voice is lifted up to reassert the old dogmas that opposed ovariotomy and anæsthesia in their early days. One may now propose ovariotomy, normal or otherwise, for hysteria, mania, or masturbation, and feel sure of a good following.

The presence of woman's reproductive organs is not essential to life. In all that relates to her abstract being they are redundant organs, and in this relation have no title to consideration. If they have any claim to respect, it is a higher one than mere animal existence. Reproduction *in posse*, or *in esse*, is the underlying reason for her existence as a woman that claims attention. This claim is purely a sentimental one, but not from any feeling for woman as a weaker being. Sentimentality of this kind has been lived down out of respect for woman herself. Although but little more than a generation ago an ethical view like this was potent in forming conclusions. Ovariotomy contended with it and mastered it by the slow logic of facts. Artificial anæsthesia had to live it down; and the speculum itself fought against it upon a battle-field that it may not even yet call its own.

While we may feel inclined to smile at moral considerations so subtle that they may be akin to that tender feeling that would make one forbear to pluck a flower, modern gynecology has drawn a still finer metaphysical line. This idea exists in the potency of human suffering; that moral and physical pain has a claim to assuagement before which every other feeling must give way. To this end function, structure, and reproduction *in posse* offer no insuperable obstacle. In analyzing the cases of removal of uterine appendages reported by Mr. Lawson Tait in the last January number of the *American Journal of the Medical Sciences*, we find at least three cases in which the natural sterilization incident to age would have probably effected a spontaneous cure; and yet, as we examine the histories more closely, we cannot say that Mr. Tait in any way went beyond the moral barriers of his art in order to give relief. In this relation the singularly ill-named "normal ovariotomy," for a very rare group of cases may be a legitimate procedure.

We must leave metaphysical refinements behind when we view the removal of the uterine appendages in its relation to the palliative treatment of hæmorrhage due to uterine myoma. The extirpation of these new growths is not rarely attended with difficulties and danger to the life of the subject that are exceeded by hardly any other operation in pelvic surgery, while either blood-poisoning or hæmorrhage is sure to destroy life unless their career is arrested. If, then, we have in removal of the uterine appendages a means of checking growth and controlling hæmorrhage, it will certainly be received as an improvement. Mr. Tait and others, both in this country and on the continent, have placed it almost beyond a doubt that the election of this operation over the difficult and risky enucleation is the better choice in many cases.

Mr. Tait's clinical histories bring out some singular facts. It is not easy to understand why removal of the ovaries, without the tubes, will not afford as certain relief against hæmorrhage as when the latter are included; but such, he states, is the fact, and an extirpation for this purpose ought to include both. Perturbations in the central nervous system, due to the enforced climacteric, were, in many of the thirty-one cases reported, quite marked. It seems that, whatever may be the loss of nerve energy from pain and hæmorrhage, there is yet a surplusage in reserve for ovulation, which shows how profound are

the nervous unities existing between the reproductive organs and the higher nerve centres. Another fact brought out will unsettle old notions. In two cases coitus, for the first time in the histories of the subjects, gave its typical satisfaction after removal of the ovaries.

The operation has been done often enough to afford grounds for the belief that but a low rate of mortality may be expected. As a means of treatment in cases of functional disturbance, which are usually but instances of exaggerated hysteria, it is probable that much time will be required before the operation can be given its proper status. In this relation it must be treated empirically, and take its chances with any drug that may be proposed for the same disease. As the operation is not always easy to perform, or wholly free from danger, it will be an exceedingly delicate point for the surgeon to decide upon its fitness as a remedy.

Here we cannot forbear to refer to some of the social aspects of ovariotomy, never, so far as we know, spoken of before. We remember to have heard Dr. Graily Hewitt say that ovariotomy was confined, in London, to what Americans call a "ring." One of the profane outside of this charmed circle had but a small hope of ever operating, and any unauthorized attempt to enter it resulted in "freezing out," than which no more effective method is known to the profession. While we cannot say that there is any deliberate attempt to confine it within a select circle in this country, yet it exerts a pernicious influence upon the fortunes of gynecologists. The profession seems to labor under the idea that ovariotomy confers a sort of brevet rank upon a gynecologist, that it is a process of earning his spurs, as it were, and without which he degenerates in the esteem of the general practitioner. After a young specialist has gained a certain amount of literary distinction, he cannot long defer the evil day when some senior of his own class, or some general practitioner in search of information, will inquire into his personal experience of ovariotomy. If he be an observing young man, he will perceive that the weight given his opinion will depend somewhat upon his answer. A gynecologist, now but little heard of, confessed to us that in a few months after adopting a novel expedient in the performance of a laparotomy, which excited some comment in the journals, he found his waiting-room crowded with patients, sent to him by physicians from a distance, although his name had been before the profession for years. A man who was an experienced operator, but not an ovariotomist, was called in a probationary way to the chair of obstetrics in a prominent country school; a case of ovarian cyst was turned over to him by the professor of surgery, and the whole faculty assembled, even those from a distance, to witness his attempt to remove it. He was afterwards told that, when his name came up for the full appointment, his chances all turned upon his prospects as an ovariotomist, and his consequent ability to advertise his chair. Yet another instance comes to us of a man in middle life, who was well known as a specialist, who had operated in manifold ways; who had written, and translated, and lectured, and who was approached by a venerable professor with the view to his appointment to a vacant obstetrical chair. He gave perfect satisfaction until, in the course of the conversation, he was asked if he had ever done an ovariotomy? He answered in the negative; the interview terminated coldly, and he never heard anything more of the appointment. We know a man, talented, learned, of good repute for skill, gentle, and tender hearted, in all things a most excellent man, who acknowledged to us, without a blush, that he hoped he might never die until he had done a successful ovariotomy. He had operated unsuccessfully several times.

We do not pretend to say that laparatomy in its many phases does not require coolness, courage, knowledge, and mechanical tact, that entitle the habitually successful operator to high consideration; but that it should be in any way a test for eminent fitness for special work is not so clear. At any rate, it is the profession at large, and not the specialists, who are responsible for the exorbitant value placed upon this operation. The young gynecologist may congratulate himself upon a very great enlargement in the field for ovariotomy. It is brought to his very door, so to speak, and he is justified in resorting to it as a cure for hysteria, metrorrhagia, mania, and other complaints. He has no one but himself to blame, if he does not possess the courage of his specialty, if not of his convictions, and straightway become an ovariotomist. If this operation is to be made the first resting-place for the foot of the gynecologist in his up-reaching after professional honors and emoluments, we fancy that there is no limit to the number of ovaries, normal and otherwise, that are doomed.

THE UNITED STATES PHARMACOPŒIA.

THE contract for the publication of the forthcoming revision of the United States Pharmacopœia having been awarded to Messrs. W. Wood & Co., of New York, the time has come to give our readers some information as to a matter which has excited considerable interest in medico-literary circles. The Pharmacopœial Convention, held in Washington, May, 1880, directed that the publication of the work should be entrusted "to the publishing house offering the best terms, the Committee (on Revision and Publication) to hold the copyright, the price of

the book to be limited, and the book to be sold through the ordinary trade channels"—the object of these instructions being, firstly, to raise a fund wherewith to defray the expenses of further revision; secondly, to furnish the work at a moderate price to those to whom it is indispensable; and, thirdly, to prevent its being hawked around the country by means of the undignified nuisance of canvassers.

The principal labor of the revision was parcelled out among the following gentlemen: Prof. J. M. Maisch, of Philadelphia, undertook the important department of Pharmacognosy, assisted by Profs. E. Scheffer, of Louisville, and O. A. Wall, of St. Louis; Prof. Joseph P. Remington, of Philadelphia, that of Pharmacy; Mr. Alfred B. Taylor, of Philadelphia, that of editing the Pharmaceutical work; Mr. Louis Dohme, of Baltimore, that of Chemistry of Iron Preparations; Prof. C. Lewis Diehl, of Louisville, that of Fluid Extracts; Prof. A. B. Prescott, Ann Harbor, assisted by Prof. H. B. Parsons, of New York, Descriptive Chemistry and Tests; Dr. Chas. Rice, of New York, the general collation and editorial revision; and some special branches of pharmacy and chemistry were under the special supervision of other members of the Committee.

A sub-committee on publication was appointed by the Committee on Revision, consisting of five members, viz.: Drs. Robert Amory, E. L. Wood, and T. Doliber, of Boston; Dr. Henry G. Piffard, of New York; and Dr. W. S. W. Ruschenberger, of Philadelphia, the latter of whom was prevented by domestic reasons from attending any of its meetings. In March, this sub-committee advertised for proposals for the publication of the work, and furnished to applicants a form of contract on which the proposals were to be made. The principal features of this were that the retail price of the work was not to exceed four dollars a copy; each bidder was asked what amount of royalty he would guarantee on the first year's sales, as well as what percentage of royalty he would pay on the retail price for each copy sold; and in place of requiring that the work should be sold "through the ordinary trade channels" as directed by the convention, there was simply a clause requiring "that the market shall be kept fully supplied." A member of the committee called attention to this significant change, without effect, and at least one house intending to offer proposals, inquired of the Chairman whether the instructions of the convention on this head were to be observed, without eliciting a reply. It is true that Messrs. Wood & Co., since the award, have stated that they accepted the two expressions as equivalent; but the ignorance in which the other competitors were kept prevented intelligent bidding, as the two systems of sales are essentially different, and a knowledge of the intentions of the sub-committee was a condition precedent to estimating safely both the royalty that could be offered and the amount that could be guaranteed on the first year's sales.

It was naturally expected for several reasons that the sub-committee would secure terms unexampled in the history of American bookselling. The price which the publisher was allowed to put upon the book ($4.00, in cloth) was exceptionally high. The last edition of the Pharmacopœia retails at $1.75, and the forthcoming one, though increased in size, could readily be sold at $3.00. The book is a necessity to a considerable class of professional men and druggists, and the sales thus will be large. Not only, therefore, is there a very large profit to be made from it, but it is a work which any house extensively engaged in medical publishing could afford to issue at a minimum profit—or even without profit—in view of its influence on other business. Competition, therefore, was keen, and leading houses prepared to pay extraordinary rates of royalty for the previlege of its publication.

Contrary to established usage in such cases, the proposals were not opened in the presence of all the bidders, but the latter were admitted singly to the room, each one as his bid was opened. They were found to be as follows:

Houghton, Mifflin & Co. (Boston) offered to publish for an equal division of the profits.

Hall & Whiting (Boston) offered 15 per cent. royalty on the first 15,000 copies, and 20 per cent. on all thereafter, with a guarantee of 15,000 copies for the first year's sales, and a suggestion that the price should not be more than $3.75.

Wm. Wood & Co. (New York) offered 10 per cent. royalty, with a guarantee of 11,000 copies on the first year's sales.

J. B. Lippincott & Co. (Philadelphia) offered a royalty of 41 per cent., with a guarantee of 2,000 copies the first year—or a royalty of 34 per cent., with a guarantee of 5,000 copies.

P. Blakiston (Philadelphia) offered 26 per cent. royalty, with a guarantee of 3,000 copies the first year.

H. C. Lea's Son & Co. (Philadelphia) offered a royalty of 30½ per cent., with a guarantee of 4,000 copies the first year.

They also offered two supplementary bids, based upon a retail price respectively of $3.50 and $3.00, but these were not even considered by the sub-committee, being returned to them unopened.

The deliberations of the sub-committee over these numerous propositions and the accompanying samples of paper, binding, etc., were very brief, and in the space of half an hour the publication was adjudged to the lowest bidder.

After the award was made to Messrs. Wood & Co., a clause was added to the contract to the effect that

the amount of royalty guaranteed for the first year's sales was to be paid, whether the sales were effected or not—thus showing that the object of the guarantee was to make sure of immediate pecuniary returns, rather than to insure a large circulation for the work, and enabling the firm to which the publication could only have been awarded because of their having guaranteed such a circulation during the first year, to escape from all liability therefor upon payment of $4,400, or much less than at least three other houses had offered to guarantee. Had the object been to ensure a large circulation, Messrs. Hall and Whiting's bid, which guaranteed 15,000 copies at a royalty of 50 per cent. higher than Messrs. Wood & Co.'s, would naturally have been accepted. But even in view of the amount to be received during the first year, the award is inexplicable, for, on the basis of a retail price of $4.00, Messrs. Wood & Co.'s bid of 10 per cent. amounts to but 40 cents per copy, which on 11,000 copies is $4,400, while Messrs. Hall and Whiting's bid of 15 per cent. amounts to 60 cents, and on 15,000 copies to $9,000; Messrs. J. B. Lippincott's lowest bid of 34 per cent. amounts to $1.36 per copy, and on 5,000 copies to $6,800; while Messrs. H. C. Lea's Son & Co.'s bid of 30½ per cent. amounts to $1.22 per copy, and on 4,000 copies to $4,880, and all these irrespective of the large sums which these latter bids would produce during the remaining nine years of the sales of this revision, to say nothing of the surplus that would accrue in case the first year's sales should exceed the quantity guaranteed. As for Messrs. Houghton, Mifflin & Co.'s offer to divide the profits, the subcommittee made no effort to ascertain what it would yield before rejecting it.

As might be anticipated, the gentlemen who had toiled for two years on the revision were indignant that the profits arising from their labors should be thus improvidently handed over to a publisher who had offered the lowest rate of remuneration. They accordingly protested against the award and elicited explanations, which amount in effect to the fact that the highest bidders, Messrs. J. B. Lippincott & Co., were rejected because of dissatisfaction with their management of previous editions; while Messrs. Hall & Whiting, whose guarantee was the largest, were thrown out because they were supposed not to understand their business, though their bids had been offered at the personal solicitation of the chairman, Dr. Amory. No special reasons were given for making no inquiry into the real nature of Messrs. Houghton, Mifflin & Co.'s proposal, which had likewise been solicited, nor for passing over those of Mr. P. Blakiston and Messrs. Henry C. Lea's Son & Co., nor for avoiding consideration of the latter's offers to publish the work at lower prices.

The award has been submitted for confirmation to the Committee of Revision, and has been agreed to, we understand, by a vote of fifteen to nine. This could hardly have been the result had the Committee been called together and the whole matter ventilated in debate. The question, however, was taken by correspondence with the widely scattered members, and was ordered rather suddenly and unexpectedly by the chairman, Dr. Rice, the editor of *New Remedies*.

We prefer to leave this singular affair to the judgment of the profession, without comment, merely remarking that some motive, not on the surface, must apparently have existed to lead the sub-committee thus to trifle with the interests committed to its charge.

QUACK ADVERTISEMENTS.

WE reprinted, lately, from the London *Lancet*, a vigorous article on "Quackery within the Profession." The *Popular Science Monthly*, also, reprinted the same article. And now Captain Davis, of the Engineers, who writes significantly from Buffalo, calls the attention of the editors of the *Popular Science Monthly* to the fact that, while on one page they are thus attacking quackery, in the advertisements of the same number appear no less than nine nostrums, from St. Jacob's Oil and Mrs. Pinkham's Compound, to Warner's Safe Kidney and Liver Cure and Compound Oxygen.

The point is well taken. The editors make an exceedingly weak and unmanly defence, and needlessly sneer at "the low standard of the religious and secular press." They plead, in mitigation, that everybody knows the advertisements are lies. But there is just the trouble. Everybody does *not* know it, and a very large number of people buy such nostrums because respectable journals, like the *Popular Science Monthly*, allow their advertisements to appear in their pages, and thus give them a *quasi* indorsement. The shameful reason is plain—the quacks pay well. They are many; they take large space to blazon their deceptive wares; they pay: *voilà tout.*

IT so happened that late at night during the past week we had occasion to consult that mine of wisdom, The Philadelphia Business Directory, title "Physicians," under which general heading all and sundry there are eight subdivisions. While searching for what we had in mind, we suddenly ran upon the name of a well-known practitioner under the heading "Physicians, Homœopathic." We rubbed our eyes and looked again, and there it still was, and with it others whose names made us stare still more. To adopt the New York Code would be bad enough, but to find that a number of our good friends had gone clean over to the "Physicians, Homœopathic,"

we confess, gave us quite a turn. Indeed we fully expected to find the entire staff of THE NEWS so classified, but a careful scrutiny convinced us that our *sanctum* was still free from apparent apostasy. But there is no knowing where another edition may place us.

SPECIAL ARTICLE.

THE MEDICAL NEWS COMMISSION

ON THE

MANAGEMENT OF VACCINE FARMS AND ON THE PROPAGATION OF BOVINE VIRUS.

(*Continued from p. 464.*)

VACCINE FARMS AT CHAMBERSBURG.

WE next visited Chambersburg, Pa., and saw there, first, the vaccine farm of Mr. W. M. McKnight, successor to Dr. B. Rush Senseney, deceased. The concern is now styled the "Pennsylvania Vaccine Company." It is stated in their circular that the business was established in 1874 by Dr. Senseney.

On inspecting the premises, the stables were found in a fair condition, but in the operating-room very little attention seemed to be paid to cleanliness. We were informed by Mr. McKnight that the virus now being propagated is the result of a mixture of two different "stocks" of virus. It appears that when Dr. Senseney began the business, he obtained, from Dr. Foster, some of the Beaugency virus; this was propagated alone until about three years ago, when Dr. Senseney received some virus from Belgium, and since then the two "stocks" have been allowed to run together.

In selecting heifers for inoculation, Mr. McKnight says he prefers those that are small, and cares but little about their age; though he says he does not use cows after they have borne calves. The animal is placed in a rack and made to lie on her back, the legs being fastened to four upright posts. The inoculations are made in the region of the udder, and on a portion of the belly adjacent thereto. The virus is collected on quills and ivory points, from the seventh to the ninth day after inoculation. No crusts are issued.

Drs. J. L. and L. F. Suesserott, of Chambersburg, are also engaged in the production of bovine virus. Their establishment is known as the "Jenner Vaccine Farm." The business was commenced in December, 1879, by Drs. Suesserott and Merklein. The latter member of the firm subsequently withdrew, and the former associated with him his son, Dr. L. F. Suesserott.

The senior member of the firm informed us that they are propagating the Beaugency virus. He says, in the fall of 1880, they received, indirectly, a supply of this virus from France, and that they have since continued its propagation.[1]

The stables belonging to this firm were found in good condition. Their heifers were apparently well selected, and evidently well fed. Their operating-room was neat, clean, and well provided with every needful appliance to carry on the business. We witnessed the operation of inoculation, and noticed that they introduced the virus in larger patches than any operator we had previously seen. Many of the vaccinated heifers exhibited a large number of spontaneous vesicles, which, appearing near the large inoculated patches, gave to the eruption somewhat the appearance of confluence.

Heifers from one year to eighteen months are preferred. They are placed on their side upon a table which is somewhat similar to that used by Dr. Martin. The inoculations are made in the region of the udder, on the inner and upper portion of the hind quarters extending towards the vulva. The lymph is collected from the fifth to the eighth day, on ivory points, prepared quills, and in capillary tubes. Crusts are also issued. The virus is said to be dried by chemical agency in a well about eight feet deep, having a metallic lining, and is maintained at a temperature of about 50°, and believed to be free from moisture.

Dr. John P. Seibert, of Chambersburg, is also a propagator, but at present is producing only very little virus. His place is called the "Franklin Vaccine Farm." No work was being done at the time of our visit.

The extraordinary demand for virus during the last two or three years, has induced several enterprising laymen of Chambersburg to engage in the business, but being told that they were at present producing little or no virus, we did not visit their establishments.

VACCINE FARMS AT WASHINGTON.

At Washington, D. C., we visited the establishment of Drs. Ralph Walsh and William E Griffiths. They have recently commenced the business in Washington, and have given their place the somewhat misleading name, "National Vaccine Establishment." The operating-room is in the basement of Dr. Walsh's residence, and is kept, as might be supposed, scrupulously clean. The stables are located on the premises, and were also in good condition.

When commencing operations, the seed-virus was obtained from the stables of one of the members of the firm, Dr. Wm. E. Griffiths, who has already been referred to as a producer in Brooklyn, N. Y. At the time of our visit no work was being performed.

As to the efficacy of the virus produced at this establishment, there seems to be no doubt. Dr. Charles Smart, of the U. S. Army, speaks very favorably of its action (MEDICAL NEWS, March 18, 1882). Likewise, Dr. Smith Townshend, Health Officer of District of Columbia, and Drs. Lincoln and Murphy, of Washington, have used it with gratifying results.

We visited Baltimore with the view of obtaining information from Dr. Register, State Vaccine Agent of Maryland, but learned that he had resigned the office, and, on account of ill health, had gone to spend some time in one of the Southern States. If we understand correctly, the object of the office of State Vaccine Agent is to propagate bovine virus,

[1] According to Dr. Martin, any virus received from France since the Franco-Prussian war does not belong to the Beaugency "stock."

and supply it for use within the State free of charge; and that this object has been virtually defeated by too meagre appropriations on the part of the State. At any rate, the Board of Health of Baltimore has been and is still procuring virus from Chambersburg and Boston.

VACCINE FARMS IN WISCONSIN.

We regret that distance prevented us from visiting the establishment of Dr. E. L. Griffin, of Fond du Lac, Wisconsin. Dr. Griffin bears the reputation, even among those engaged in the specialty, of being an intelligent and conscientious propagator. A very favorable account of his establishment is given by Dr. H. A. Johnson, in the *National Board of Health Bulletin*, March 4, 1882.

GENERAL REMARKS.

It may be of interest to state, that the vesicles which appear on the heifer after inoculation do not very closely resemble typical vaccine vesicles on the human subject. When maturation has taken place, instead of finding the characteristic pearl-colored vesicle, there appears at the place of insertion of the virus a thin brownish crust, somewhat elevated, and surrounded by a slightly vesicular condition. This appearance may probably be due to the fact that each insertion of the virus is made to cover so large a surface, being usually from a half to one inch square.

When the vesicles have reached maturity, and are ready for yielding lymph, the animal is placed upon the table, the thin brownish crust is removed from one of the vesicles, and the process of dipping the points is begun. The lymph is seen to issue very slowly and gradually from the parenchyma of the vesicle, apparently as an exudation. Occasionally the flow ceases, and it then becomes necessary to make use of gentle pressure, either by the fingers or forceps. But this pressure should not be continued too long, for virus taken after a certain amount has been collected must certainly prove inert. As in the human subject, so in the animal, all vesicles do not yield alike, reliable and active lymph. It is therefore evident that intelligent observation and experience are needed to determine the choice of vesicles, as well as the precise time to begin and to cease collecting from them.

SOURCE OF THE VIRUS PROPAGATED.

In inquiring into the propagation of animal lymph, the question of primary importance is, what is the source or origin of the virus being propagated? is it strictly and exclusively animal? The importance of this question will perhaps be better appreciated when we recall the fact that, up to 1881, no *perfectly authenticated* case of *true* spontaneous cow-pox had ever been known to occur in America. In 1877, Dr. Martin stated, before the American Medical Asssociation, that he had for many years offered a considerable reward for information of any case which should prove to be true cow-pox, and that he had expended considerable, both of time and money, in travelling great distances, visiting at various times over twenty dairies and stables in which cow-pox was reported to exist, without being rewarded by discovering what he had so eagerly sought. On several occasions he found animals suffering from a spurious form of bovine pock, and in two instances at least, large quantities of fluid from the pustules had been collected on many hundred quill slips, under the impression that it was genuine, by persons less experienced in this important specialty. When the case of true spontaneous cow-pox had been discovered at Cohasset, in February, 1881, the discoverer, or informant, applied for and received from Dr. Martin & Son a pecuniary reward.

In some other countries the occurrence of cow-pox is very variable. It is said to prevail at times in very many different dairies, and then again no case will be heard of for many years. On the authority of Bousquet, not a single *properly authenticated* case of spontaneous cow-pox was reported in Continental Europe for thirty years previous to 1836; and in all Europe not more than two or three genuine cases had been observed for over twenty-five years previous to 1831. About this period, in some parts of Europe, retro-vaccination, or inoculation of the heifer with humanized virus, was practised, with the hope of remedying the supposed contamination and evident deterioration of much of the long-humanized virus then in use. This method did not then meet, nor has it since met, with much favor from the most competent observers, whose opinion alone is worth knowing. Ceely, who was as anxious as any other experimenter that retro-vaccination should succeed in renewing the pristine vigor of the virus, reluctantly states his conviction that long-humanized virus gains nothing in vigor, nor even in purity, by its transmission through the animal; but that, on the contrary, it loses very markedly the quality of "taking," or of inducing vaccinia. We should not, however, omit to state a very curious fact recorded by a very competent observer, viz., that the virus of retro-vaccination recovers its former quality of "taking" after a single human remove; but that, as Ceely and others have noticed, it gains nothing in vigor beyond what it possessed before its transit through the animal. It is evident therefore, that, whatever scientific interest may be found in the study of retro-vaccination, it possesses no real practical value as a source of vaccine supply.

VARIOLATION OF KINE,

Or inoculation of heifers with variolous virus, has frequently been resorted to as a supposed means of artificially inducing cow-pox. We are inclined to believe that a great deal of misapprehension exists as to this method. There is a very general impression that true animal vaccination consists in nothing more or less than bovine variolation. While we are not prepared to deny that Ceely, and probably a very few others, have succeeded in their experiments in this direction, yet hundreds of other experimenters have utterly failed, and a few have done worse than fail, for virus procured in this way has more than once or twice been the means of a wide diffusion of small-pox.

Many physicians are doubtless familiar with the very unfortunate results of this kind which happened a number of years ago to a practitioner of medicine in the State of Massachusetts; and which were subsequently published under the title, "Attempt to Procure Vaccine Matter from the Original Source—Production of True Variola."[1] It appears that in 1836, this physician, conceiving that the not unfrequently imperfect protection afforded by vaccinia arose from deterioration of the humanized virus then in use, inserted into the udder or teat of a cow some variolous virus taken from a pustule upon the body of a man who had died from small-pox. From the vesicles which developed, virus was taken and inserted into the arms of about fifty persons. Presently, one of the number first vaccinated, or rather inoculated, sickened with small-pox. Up to this time the virus had been used on successive days, and consequently other cases gradually followed, until a large number of persons were ill of the disease. Not all who received the virus sickened; but of those who suffered, three died. It is said that the sad affair so operated upon the mind of the physician that he became insane.

A similar occurrence has been more recently reported by Dr. Thomas F. Wood. In his own words:[2] "I had occasion just after the war (1865–6), while in charge of the Wilmington Small-pox Hospital during an epidemic of the disease, to go over the same ground of attempting the production of artificial cow-pox. . . . .

"It happened, though, during the progress of the experiment, that an army medical inspector, whose name I have forgotten, was making a tour of the hospitals; hearing of my experiments, visited my hospital and after examination pronounced the small vesicles genuine cow-pox, and confirmed his faith in his opinion by making some inoculations on the arms of two children in an Irish family near by. The inoculations resulted in a genuine small-pox, which went through the family in various grades of intensity."

Results like these lead us to doubt very seriously whether the vaccine disease has its origin, as commonly supposed, in variolous infection of the cow. If it is at all possible for nature in some mysterious way to elaborate original cow-pox from variolous virus introduced into the system of the cow, it is evident that man cannot with certainty cause her process to be repeated at will, and therefore variolation of kine as a source of vaccine supply cannot be considered practicable.

(*To be continued.*)

REVIEWS.

DISEASES OF WOMEN: INCLUDING THEIR CAUSATION, SYMPTOMS, DIAGNOSIS, AND TREATMENT. A MANUAL FOR STUDENTS AND PRACTITIONERS. BY ARTHUR W. EDIS, M.D., Lond., F.R.C.P., M.R.C.S., Assistant Obstetric Physician to the Middlesex Hospital, late Vice-President of the Obstetrical Society of London, etc. etc. With 148 illustrations. 8vo. pp. 576. Philadelphia: Henry C. Lea's Son & Co., 1882.

THE author has been long known to the gynecologists of this country as one of the active workers in the Obstetrical Society of London, a body composed of over seven hundred fellows, but like all such associations, dependent chiefly for its reputation upon the labors of a few earnest men, and his work under review shows how well he is also acquainted with, and how highly he values, the contributions to science of such Americans as Drs. Sims, T. G. Thomas, Emmet, Goodell, Battey, Bozeman, and others, among them the late Drs. Hodge and Peaslee.

As might have been expected, Dr. Edis has prepared a work which abounds in practical teaching, and one which will be particularly valuable to students and young practitioners in our country, as he has been careful to provide numerous formulæ for the preparation of medicines recommended. He has also been particular to give due credit to various writers in Europe and America for instrumental contrivances, improved methods of treatment, and forms of operating. In this sense the book is a compilation; but it is none the less valuable for the selection, as the work has been done by one of large and varied experience, who has also largely drawn therefrom in his therapeutical directions. Portions of the volume have been very much condensed and made to embrace a long list of ailments; whilst others have been much extended, where the importance of the subject and experience of the author appeared to require it. Thus, seventy pages are devoted to the subject of displacements of the uterus, and sixty-five woodcuts are used in illustration. A like space is given to the diseases of the ovaries, including ovarian tumors, their diagnosis and surgical management. Twenty-four pages are allotted to the consideration of the numerous diseases of the vulva, so often neglected in works upon the diseases of women; and an equal space for those of the vagina.

Dr. Edis draws a distinction (page 133) between *precocious* and *premature* menstruation, as to their influence upon the growth of the body; speaking of the subjects of the former as "*stunted*," and of the latter as "not usually interfered with," in height of body. He also remarks that "children as young as eight and ten years" have "before now borne living children at full term." Having very thoroughly examined the two subjects of "*Early Pregnancy*" and "*Early Puberty*" several years ago, the reviewer has been led to form a somewhat different opinion. In precocious or infantile menstruation, the mind is in accordance with the age of the subject; but the body presents the appearances of puberty, and gives the girl the contour of a little woman, and of course under advanced development she looks as if stumped or stunted. Such girls are, however, as a general rule, tall for their age in childhood; but reaching full maturity early, may be short of stature at the age of eighteen or twenty. We agree with Dr. Edis as to the effect of *premature* menstruation. In three subjects, all in the higher walks of life, known to the reviewer, in whom menstruation commenced at the age of nine years, there was certainly no stunting at the time, nor subsequent check in growth, as all reached the full average height. On the point of maternity at the age of eight years, we are not one in opinion with the author. The youngest mother in America was ten years and three weeks old when her child was born; and the youngest in Great Britain, until quite recently, twelve; but one of nine has been lately reported. Children capable of bearing, or presumed to be, at eight, have been noticed by Sir Astley Cooper and others, but we have never been able to find a report of

[1] Boston Medical and Surgical Journal, Feb. 23, 1860.
[2] The Chicago Medical Journal and Examiner, Oct. 1881.

a birth at that age, that we could be satisfied with as reliable.

Dr. Edis makes an oversight (page 273) in speaking of Battey's operation, when he says it "has thus far been performed about thirty times, with a result of three deaths—rather a large proportion—the abdominal having proved more dangerous than the vaginal section." This operation is certainly far advanced in its third hundred. Mr. Lawson Tait has alone operated oftener than thirty times, and Prof. Hegar, of Freibourg, many in excess of it. The percentage of loss in the first and second hundred, together, reached about eighteen. Mr. Tait lost but two in a succession of twenty-six cases. The ten per cent. of Dr. Edis is probably still within the rate of death. The abdominal method of operating is now almost universal.

The author favors the use of the bichloride of methylin as an anæsthetic in ovariotomy, claiming that it is safer than chloroform or ether, less liable to produce vomiting, and not inclined to excite cough when first inhaled.

We are not yet converted to the use of the newly coined verb *differentiate*, nor to that of the noun *causation*, for *producing* or *exciting cause*. In our dictionary, "*causation is the act of causing*." The word *vulval* strikes us also unfavorably, as an improvement upon *vulvar*. "*Rest up*," so often used in the book, we presume to be reclining, but not in bed. It is new English here. Dr. Edis' book, like those of other men, is not perfect, but its small blemishes are so few that they attract one the more in an examination. The treatise is a valuable addition to our gynecological collection.

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF THE STATE OF CALIFORNIA.

Twelfth Annual Session, held at San Francisco, April 19 and 20, 1882.

(Specially reported for THE MEDICAL NEWS.)

THE twelfth annual session of this Society since its reorganization was held in San Francisco, April 19 and 20, 1882. In the character of the papers submitted, in the attendance of members, and in the concluding banquet so hospitably given by the City medical societies, this session was felicitous beyond all others in the history of the Society.

At the opening of the morning session a brief and admirable address of welcome was delivered by Dr. George H. Powers, Chairman of the Committee of Arrangements. From the Academy of Sciences was received and accepted an invitation to visit the Crocker-Stanford collection, of which a reconstructed mammoth is the central figure.

The President, DR. TYRRELL, in the

ANNUAL ADDRESS,

protested against the recent action of the New York State Medical Society in the matter of consultation with irregular physicians.

THE NEW YORK CODE.

"To us," said he, "armed with the knowledge of the past, with the horizon of truth ever widening before us, how childish seems the remark that we belong to the 'old school,' as though our art were a thing of the dead past and not pulsating with the onward surge of the living present! that all in medicine that is new and progressive came into existence through the infinitesimal nothingness of what this generation in its wisdom is pleased to call the 'new school,' whose disciples are making such earnest and persistent efforts to obtain recognition by regular physicians, encouraged by Dr. Bristowe in his now famous address before the British Medical Association at Ryde, in which he promulgated the idea that association in consultation with homœopaths is possible without loss of dignity and self-respect. Happily for science, this strange and derogatory doctrine was instantly and decisively repudiated by the profession of Great Britain. This levelling-down doctrine has reached the Pacific Coast, as is evidenced by the recent address of a president of one of the San Francisco Medical Societies. To present this matter fairly we will analyze the remarks of the distinguished author into the several reasons, against which no valid objection can lie to debar us from meeting homœopathic practitioners at the bedside.

First.—They are not behind the regular practitioner in education, intelligence, or gentlemanly bearing.

Second.—Although reason rebels against their peculiar postulates, they enjoy the confidence of no inconsiderable portion of the community.

Third.—A militant attitude toward them is not conducive to medical morality.

Fourth.—That in consultation, Hahnemann and his doctrines will be ignored, and in addition will be laughed at by the homœopathic attendant.

Fifth.—You will be surprised to learn how much your homœopathist knows of the principles of regular medicine, and how much humbug there is in his antagonism to them.

Sixth.—It is easier to consult with an educated homœopath than with a physician in regular standing whose beliefs are antiquated and whose methods are superseded.

Let us follow these reasons to their legitimate conclusions. To the first statement given there can be no valid objection, except its falsity; but to say that we can consult with a man against whose postulates our reason rebels, and whose pretensions we know to be a falsehood, because he has the confidence of no inconsiderable portion of the community, is to say that we can countenance a fraud in order to pocket a fee. If this is to be our rule of conduct, why not consult with Lipotai or similar Chinese impostors, with magnetic healers and other charlatans, who likewise possess the confidence of no inconsiderable portion of the community, not only here but in every other city of the Pacific Coast? If consultation is to be made on the basis that the homœopath, being an intelligent man, will, at the bedside, ignore Hahnemann, laugh at his doctrines, surprise us with his appreciation of the principles of regular medicine, and that to oppose his pretensions is against medical morality, then are we to make ourselves *particeps criminis* in the deceit of consulting with a man who is pretending to be what he is not—professing homœopathy to his confiding patient and laughing at its absurdities to his presumably honest consultant. Truly this is a morality that can be little more elevating than even 'posing in a militant attitude.' The last plea for fraternization is if possible less defensible than any; that it is easier to consult with an educated homœopath who *has* no faith in his own practice, and *pretends* to have none in ours, than with a regularly educated physician who still clings to methods and beliefs long since superseded; which would of necessity include those who still believe that bleeding is often beneficial in disease, and that calomel has some depurative action on the liver. The time has come when we must cease dallying with the wanton spirit of mock courtesy and time-serving sentimentality that would make us forget the glorious history of our art with all its attendant triumphs to do honor to a fiction in science, an imposition on credulity, and accept on an equality the traders in a name. The science of medicine needs no pretence to establish its truth, no

mystery to enhance its merits, no falsehood to make known its claims. It stands to-day the immortal testament of our progress, the holiest temple of our civilization."

Dr. Tyrrell advocated the appointment of plumbing and drainage inspectors, under the supervision of boards of health. He urged, at some length, the establishment of a criminal insane asylum, and such modifications of our present civil and penal codes as will lead to the permanent seclusion of the criminal and vicious insane, and their separation from those merely intellectually diseased. The subject of medical experts also engaged his attention. Judges only should have the authority to appoint medical experts, or, better still, they should be officers of the government, as are the judges whom they assist. To secure impartiality, their appointment should be permanent; to secure competency, they should be rigidly examined; to secure the ability necessary to the office, they should be well paid.

The Address was enthusiastically received, and a thousand copies ordered for the use of the Society.

The able report of the

COMMITTEE ON PRACTICAL MEDICINE

was read by its Chairman, DR. W. S. THORNE. Reference was made to the vast extent of contemporaneous medical literature, whose annual product reaches the enormous totol of 1500 volumes and 2500 pamphlets. From the marked effect of the salicin compounds on both diseases, a probable pathological relationship was inferred between acute rheumatism and glycosuria. During the past year, with grain doses of salicylate of soda, he had reduced the daily excretion of sugar from 2640 to 232 grains, and the daily quantity of urine from 128 to 56 ounces. Then followed a consideration of the chemical and morbific relationship between lactic acid and glucose. The analysis of an extensive series of observations led him to conclude that recent clinical experience but feebly sustains a belief in the communicability of tuberculosis proper through the medium of contanimated air in the ordinary intercourse with infected persons. The unexampled results of Dr. Weir Mitchell's treatment of neurasthenia by forced alimentation, massage, and improved hygiene, suggests the hope that some kindred method may prevent the catastrophe of retrograde changes in tubercular deposit, or even arrest such changes when once they have begun.

During the afternoon, DR. IRA E. OATMAN presented the report of the

COMMITTEE ON MEDICAL LEGISLATION,

with a supplementary report by Dr. DeWitt. In the discussion that arose, the chaotic condition of the medical mind on this subject was brought out in bold relief. Some favored the old law, some the proposed new law, others, various amendments to either; some, a mixed board, others, a "straight" one, and still others, no law at all. The final and rational conclusion was to bear the ills we have, rather than fly to those we know not of.

THE NEW YORK CODE.

DR. JAMES SIMPSON introduced a resolution recommending to the American Medical Association the favorable consideration of the rule recently established by the New York State Medical Society, permitting members of all societies in affiliation with it to consult with *all* legally qualified practitioners.

A strong protest against such action was filed by the Sacramento Society for Medical Improvement.

A motion to lay the resolution on the table was carried by a large majority.

The reports of the Treasurer of the Society and of the Treasurer and Secretary of the Board of Examiners were received and referred to the Auditing Committee.

The following gentlemen were elected

HONORARY MEMBERS:

Prof. Rudolph Virchow, of Berlin; Dr. Charles Sutherland, Medical Director, U. S. A.; Dr. G. M. Sternberg, Surgeon, U. S. A.; Dr. Elisha Bailey, Surgeon, U. S. A.; Dr. J. C. Bailey, Surgeon, U. S. A.

DR. W. H. MAYS read an excellent paper on the *Modern Use of the Forceps, with Demonstrations of Tarnier's New Instrument.*

DR. W. E. BRIGGS, as Chairman, read the report of the

COMMITTEE ON OPHTHALMOLOGY,

relating a case of spontaneous reduction of a dislocated lens, and recommending the more frequent resort to the electro-magnet for the removal of bits of iron and steel, even when visible. The use of the magnet occasions less violence to the ocular tissues than the use of the forceps, and less or even no danger of thrusting the foreign body either out of sight or into the anterior surface of the crystalline, and thus increasing the difficulties of extraction and the danger of subsequent opacity of the lens. Besides, when previously visible, the foreign body may be obscured by hæmorrhage consequent upon the operation for its removal. He exhibited a double curved scissors for the performance of optico-ciliary neurotomy and the simultaneous excision and withdrawal of a portion of the optic nerve.

DR. BARKAN exhibited a large number of ophthalmic and aural instruments.

DR. E. T. WILKINS, Physician to the Napa Asylum, read the

REPORT ON MENTAL DISEASES,

dealing with the alleged alarming increase of insanity in our State, and the methods of its prevention. He took the ground that insanity is essentially an incurable disease, and that in this, far more than in any other, department of medicine our efforts should be prophylactic rather than curative.

DR. A. M. WILDER read a valuable

SUPPLEMENTARY REPORT ON OPHTHALMOLOGY,

treating quite exhaustively of the year's work in the matter of color-blindness, and he was appointed to coöperate with the Committee on Medical Legislation in securing proper legal enactments in regard to this visual defect.

DR. A. W. SAXE read the

REPORT ON MEDICAL EDUCATION,

and instanced the high percentage of rejections in examination of applicants for army medical positions as indicating the sad condition of medical education in our country. This ratio was stated as ranging in the past six years between 27 and 82 per hundred.

SECOND DAY.—APRIL 20TH.

THE REPORT OF THE COMMITTEE ON GYNECOLOGY

was read by its Chairman, DR. CLINTON CUSHING. His paper was mainly devoted to the intra-peritoneal operations of gynecology. He believes that perfect cleanliness is but Listerism under another name, and that the use of the spray is superfluous—disinfection of the hands of the operator and his assistants, and of all the appurtenances of the operation, accomplishing all that can be done in the way of antisepsis. During the continuance of the north wind, the Pacific simoon, he advised against the performance of any serious operation that can be safely deferred.

DR. KATE N. POST read a valuable

REPORT ON DISEASES OF WOMEN AND CHILDREN,

narrating the history of a case of stone in the bladder, and lithotomy in a boy, and presenting specimen, with

description and history of an unique case of congenital malformation of the heart.

DR. GEO. W. DAVIS read a voluntary paper on *Medical Experts*, for which he received a special vote of thanks.

The report of the Committee on Necrology was read by DR. C. G. KENYON, and, with DR. MURPHY'S paper on *Venesection*, was referred to the Committee on Publication.

DR. W. P. GIBBONS made a valuable contribution to the medical botany of the Pacific Coast in his

REPORT ON INDIGENOUS BOTANY,

based on numerous original analyses. At the close the Doctor took strong ground against the manner in which certain pharmacists have flooded the country with "new remedies," whose medicinal virtues are vaunted by physicians as nameless in the profession as the weeds they sing.

DR. H. J. CRAMPTON read a paper entitled, *Illustrations of Country Surgery*, in which he related a number of cases that attested the fertility of resources of the country surgeon, as well as the recuperative powers of the country boy, under adverse circumstances.

In the evening, DR. STERNBERG, Surgeon, U. S. A., and an Honorary Member of the Society, read a paper on

BACTERIA AND THE GERM THEORY OF DISEASE.

The paper was illustrated on canvas by numerous photo-micrographs, taken by the author during his investigations in Havana and New Orleans as to the nature and cause of yellow fever. He had made frequent examinations of the bacillus malariæ of Tomasi-Crudeli, but was unable either to affirm or deny its causative relation to malarial disease. He believed, however, that his investigations threw great doubt on the alleged discovery of such relationship. As to yellow fever, his conclusions were chiefly negative, although, on *a priori* grounds, he believes the poison to be particulate, and not gaseous. The address was eagerly listened to, and, by special request of the Society, will appear in its Transactions.

The following are the officers for the ensuing year: *President*, Dr. L. C. Lane; *Vice-Presidents*, Drs. Ira E. Oatman, Wm. E. Taylor, E. A. Stockton, and H. J. Crampton; *Treasurer*, Dr. Ira E. Oatman; *Permanent Secretary*, Dr. Wallace A. Briggs; *Assistant Secretaries*, Drs. Thomas Ross and C. G. Kenyon; *Board of Censors*, Drs. O. O. Burgess, G. W. Davis, G. H. Powers, A. H. Pratt, and A. A. Kirkpatrick; *Board of Examiners*, Drs. R. H. Plummer, Clinton Cushing, W. F. McNutt, James Simpson, H. Gibbons, Jr., A. H. Agard, C. N. Ellinwood; *Alternates*, Drs. J. S. Adams, A. M. Wilder, C. G. Kenyon. *Place of next meeting*, San Francisco.

The thanks of the Society are especially due to the Committee of Arrangements for the excellent manner in which it discharged its duties. There was not a single "hitch" in the proceedings, and the banquet provided by the Committee, by instruction of the San Francisco County Medical Society, the Obstetrical Society, and the Society of German Physicians, was extremely handsome and greatly enjoyed.

MICHIGAN STATE BOARD OF HEALTH.

(Reported for THE MEDICAL NEWS.)

THE regular quarterly meeting of this Board was held at Greenville, Mich., on April 11, 1882, in connection with the Sanitary Convention held at the same time and place. The following members were present: Rev. D. C. Jacokes, of Pontiac; J. H. Kellogg, M.D., of Battle Creek; Arthur Hazlewood, M.D., of Grand Rapids; John Avery, M.D., of Greenville; and Henry B. Baker, M.D., of Lansing, Secretary. William Oldright, M.D., Chairman, and J. J. Cassiday, M.D., member of the newly appointed provincial board of health of Ontario, were present, and were invited to take seats in the meeting. In the absence of the president of the Board, Mr. Jacokes presided.

The secretary presented the subject of inspection of immigrants, and stated that the National Board of Health had granted the request of this Board for an inspection service at Port Huron, and the system would go into effect on May 1, at which time the whole system, by coöperation of several State Boards of Health, would go into effect. He suggested that the health authorities of Toledo and Cleveland be invited to join in this movement. He stated that at the meeting of the Sanitary Council of the Mississippi Valley, at Cairo, Ill., April 19, this subject would be considered, and that it was desirable that this Board be represented at that meeting. By vote of the Board, Dr. Baker was requested to represent the Board at that meeting.

Dr. Oldright spoke of the inspection of immigrants at Toronto, and of the importance of notification to other boards of danger to be feared from immigrants. He also said any movement made by this Board would meet with hearty coöperation by the Ontario Board. He said the work done by this Board for the restriction of scarlet fever and diphtheria was fully as important as that for the restriction of small-pox.

The following motion was carried:

That the secretary be instructed to correspond with the health authorities of the Dominion of Canada, and the several provinces thereof, and of provincial and municipal boards of health where they exist, asking their coöperation in the proposed immigrant inspection service.

DR. HAZLEWOOD read a proposed document giving best household antidotes to be used in case of poisoning while waiting for a physician, or when one is not to be had. It was accepted, and the Committee authorized to modify it before publication in the annual report.

Dr. Hazlewood, Committee on Poisons, etc., presented a letter from Dr. Gordon, of Swartz Creek, relative to lead-poisoning by use of a feeding-bottle (which was exhibited to the Board), in which the sinker keeping the supply-pipe in the milk was of lead, and so arranged that all the milk had to pass over it before entering the infant's mouth. The secretary was requested to notify the manufacturers of the pernicious character of the bottle, and the report was accepted and ordered published in the annual report.

Circular 35, revised, relating to the duties of health officers, was presented, adopted, and twenty thousand copies ordered printed.

Dr. Kellogg, as special committee to prepare a circular on criminal abortion, made a report and read a proposed circular. The report was accepted, the committee continued, and the subject of issuing the circular laid over.

Dr. Kellogg was requested to represent the Board at the meeting of the American Medical Association at St. Paul.

The next meeting of the Board will be on Tuesday, July 11, 1882.

NEW INVENTIONS.

A NEW UTERINE REPOSITOR.

By J. A. PORTER, M.D.,
OF BROOKLYN, JACKSON CO., MICH.

ALL instruments of which I have any knowledge are more or less imperfect as replacers or readjusters of malposed uteri. It seemed to me they were imper-

fect to an unnecessary degree. To remedy this somewhat, and to meet my wishes in a practical form, I have had G. Tiemann & Co. devise an instrument for me that, I think, overcomes, in a large measure, the objectionable points of all others. By reference to the wood-cut, it will be seen at once that it is simple and easy to manipulate. It is easy to carry the intrument to place, and the points being of copper, they can be curved to any required degree. The instrument, when held by the handle, without touching the lever disc, allows the point to be carried along the uterine canal and take any direction necessary. On the lever disc is a mark (*i*) that shows the direction and angle the uterine point has taken. After the point is fully within the uterus, and it ought to reach to the fundus, but not press thereon, the forefinger of one hand may be used to assist the instrument, if desired, by pushing against the body of the uterus as felt through the vaginal wall. The forefinger of the hand holding the instrument pressed against one lever and the thumb pulling on the other will cause the point to rotate so as to bring the uterus to the desired position. The instrument works almost like a long finger, as it were. You know as you use it how much power or force you are exerting; you know how much you have moved the organ at any time; can judge of the rigidity or elasticity of

i shows the mark on lever disc, which shows the direction the points take. The points screw into the button disc.

the parts moved, because the whole force is in your fingers, and not in a screw. After having moved the uterus into place, by letting go the levers, you will be able to see if it tends to return back again to its old position. The instrument is easily kept clean. As there has always been a difficulty after replacement of a uterus with an instrument in getting the point out again without turning the organ back to its wrong position, I have had points made which flex only in one direction. These points enter the uterus with the greatest facility, and if the version is complete after introduction, the instrument will perhaps need to be revolved upon its axis, and then use the lever disc. The turning the instrument on its axis is to bring the uterine point into proper relations so so as to get its rigid action. In taking the instrument out, elevate the handle towards the abdomen, so as to cause the button disc to describe an arc of a small circle from the uterus backwards, downwards, and then forwards. By this motion the point will slip out without displacing again the replaced organ. A rubber disc is also made to go on the button disc for use in cases where the instrument might too easily enter the os, such as in lacerations, gaping os tincæ, etc. Many other uses or modes of use will readily suggest themselves to the practical gynecologist. With no other instrument can the uterus be so easily manipulated in examinations made to decide the question of attachment or non-attachment of tumors to itself within the abdomen. Here the rigid points are best. With no other instrument can you so definitely guide the uterus between adhesive bands into its natural position, and so easily return it again if there would seem to be any necessity therefor. The instrument is especially valuable to those of us who believe in the curative value of frequently restoring the uterus to its normal position, not because its mere presence in the abnormal position produces any difficulty or distress, but because in that position it is held more or less immovable, and the stimulus of motion is denied the blood-vessels and nerves, etc., bringing about all the trouble that immobility of any other organ would produce. Motion is needed in all parts, and relative motion, too. But an article of this nature forbids more than mention of this matter.

CORRESPONDENCE.

DETECTION OF COLOR-BLINDNESS.

To the Editor of THE MEDICAL NEWS.

SIR: In your number for April 8, p. 389, you speak of the methods for detecting defective vision, proposed by Mr. Roberts to the British Association for the Advancement of Science, taken from Dr. Daae (not *Daal*, as your compositor makes it), Snellen, and Holmgren.

The method of Dr. Daae, of Kragerö, Norway, which Mr. Roberts copies, is an imitation of Holmgren's with the worsteds. Like all other imitations of his method, it is like attempting to use a piece of looking-glass with a hole scraped in the silvering, in place of a Loring ophthalmoscope.

All attempts to arrange apparatus for enabling the laity to test visual power or color-preception are worse than useless. How can the layman decide whether "vision one-half" is due to ametropia or to corneal opacities, etc.? He can only record the amount of vision indicated by test letters; which tells us nothing. Such authorities as Prof. Donders and Prof. Holmgren have given us their experience, and have expressed themselves most emphatically on this point (*vide* the enclosed brochure). With them, all who have undertaken tests of vision agree.

Statistics as to vision gathered by the laity cannot be accepted. In the present state of the profession, ophthalmic surgeons alone can examine for ametropia. As to defects in the color-sense, no method equals in completeness and facility of use that of Holmgren, *when the worsteds are properly chosen and the examiner thoroughly understands the method.* Here has been the difficulty. There is no royal road to knowledge. To become a good examiner requires study, patience, and not a little practical familiarity. The committee of the British Ophthalmological Society well say that an examiner is not made in a week or a month.

The English railway surgeons particularly resisted Holmgren's ideas and results, as well as my own. I finally induced them to test properly, and they now admit their former mistakes. The report of the above-named committee is conclusive, wholly supporting my position, which is now well known in this country.

You mention the cover of Mr. Roberts's "booklet" as "both striking and useful, being in three horizontal bands of red, green, and violet." Dr. Daae's imitation of Holmgren's test, you say is "quite worthy of being a 'Yankee notion.'" The cover *is* one. I had my manual "Color-blindness, its Dangers and its Detection," bound in this way to attract attention to the three primary colors. No doubt Mr. Roberts appreciated its value. Some of my reviewers, who *looked no further*, thought that the cover was intended for use as a test for color-blindness; others concluded that I had thereby committed myself to the Young-Helmholtz theory of color-perception.

The examinations as to visual power and color-per-

ception, made in large numbers by the Sanitary Association at the close of the civil war, were almost worthless from lack of proper methods. Equally useless will be such attempts as are proposed by the Anthropometric Committee of the British Association for the Advancement of Science, through Mr. Roberts' "booklet." It is a pity; for ophthalmic surgeons can be induced to study up the subject, and make tests, and record results which will be of value, while at the same time disseminating truth as to dangers on land and sea from defective vision.

I remain, respectfully, yours,

B. JAY JEFFRIES, M.D.,

April 24, 1882.
15 CHESTNUT ST., BOSTON, MASS.

NEWS ITEMS.

NEW YORK.

(*From our Special Correspondent.*)

MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK.—Our readers are probably already conversant, through the daily press, with many of the details of the controversy which has led to the recent withdrawal of the entire Post-Graduate Faculty of the Medical Department of the University of the City of New York. It is, of course, a matter of genuine regret, that the difficulties which have arisen have been given such unsavory notoriety by the secular press. Though it is not desirable to furnish further matter for the gratification of morbid curiosity, yet to the general medical profession a plain, impartial statement of the real questions at issue is due.

From the official records, it appears that on the 27 of April, 1875, the Faculty established what is known as the Post-Graduate Course. This was "for the purpose of facilitating the efforts of graduates in medicine who have come to New York to renew their professional studies." The Post-Graduate Faculty then consisted of Professors Roosa, Hammond, Stephen Smith, Gouley, Pallen, and Piffard. To this list was subsequently added Drs. Sturgis, Macdonald, and Little.

Though the Faculty was formed, the course of instruction was never organized. The professors gave each a weekly lecture to the general class. Physicians in attendance did not even know that there was any special course being given for their benefit. The result was that the Post-Graduate Faculty had no other functions than the most transient lecturers. It followed that this Faculty became dissatisfied with its position, and from time to time protested against being placed in this attitude towards the class, and asked to have its course of lectures completely organized.

In 1881, the Post-Graduate Faculty had a formal meeting with the Governing Faculty and asked that they might have in accordance, as claimed by them, with an old understanding, a room set apart for post-graduate instruction. The expenses of this department were to be paid from the fees received from physicians attending the lectures, and what remained was to be divided among the professors of the Post-Graduate Faculty. They further asked to co-operate with the Faculty in regard to the methods of instruction. This was declined.

It is now claimed that the Post-Graduate Faculty were for a time tacitly permitted to look forward to the realization of their hopes. The Governing Faculty, while they evidently did not wish to make themselves in any way responsible to the Post-Graduate Faculty for their movements, nevertheless, at this time, when all the factors which could be brought to bear on the prosperity of the University were so much needed, did not flatly deny the Post-Graduate Faculty those privileges. Hence it was that definite action was postponed from year to year. During the meantime the financial prosperity of the college increased, and with it the conservatism of the Governing Faculty became more manifest. It was when this state of affairs developed that the Governing Faculty felt that they need no longer hesitate to positively deny the request of the Post-Graduate Faculty, and furthermore gave them to understand that unless they were satisfied to continue their lectures, as at present, their co-operation in teaching could be dispensed with. Thereupon the gentlemen of the Post-Graduate Faculty tendered their resignations, to take effect at the close of the present Spring session, or sooner if convenient.

Owing, however, to certain unpleasant statements made by some members of the Governing Faculty, which appeared in the New York daily papers, and which were not contradicted, Drs. Roosa, Hammond, Gouley, Piffard, Little, Sturgis, and Pallen handed in their resignations a second time, and requested that action upon them be immediately taken by the Governing Faculty. In accordance with this request, a meeting of the Faculty was called and the resignations of these gentlemen accepted.

Dr. H. Knapp has been appointed Professor of Ophthalmology in place of Prof. Roosa.

Dr. A. E. Macdonald has been appointed to the professorship of Psychological Medicine in addition to that of Medical Jurisprudence, which he has previously held. Dr. Polk, now Professor of Obstetrics and Diseases of Women and Children, will give a gynæcological clinic once a week, and hence there will be no new appointment to fill the vacancy caused by the resignation of Prof. Pallen.

Some of the remaining vacancies will be filled at as early a date as possible, but it is not the intention of the Faculty to fill all the vacancies caused by the resignation of the Post-Graduate Faculty.

In regard to the gentlemen of the Post-Graduate Faculty who have resigned, it is understood that they have no idea of ceasing to teach medicine, and that it is their aim to establish an endowed medical college, preferably to be connected with some existing college or university as its medical department, and further to afford abundant facilities for advanced clinical instruction in the several departments of medicine. To this end 14 professorships, 14 assistant professorships, and 28 assistantships are proposed.

BALTIMORE.

(*From our Special Correspondent.*)

A NEW DENTAL SCHOOL.—In accordance with an Act of the Legislature of Maryland, recently passed, conferring upon the Faculty of Physic of the University of Maryland the authority to grant degrees in dentistry, the following Faculty of the Dental Department has been appointed, viz.:

Ferdinand J. S. Gorgas, M.D., D.D.S., Professor of Dental Science, Dental Surgery and Mechanism; James H. Harris, M.D., D.D.S., Professor of Operative and Clinical Dentistry; William E. A. Aiken, M.D., L L.D., Professor of Chemistry; Samuel C. Chew, M.D., Professor of Materia Medica and Therapeutics; Francis T. Miles, M.D., Professor of Physiology; J. Edwin Michael, M.D., Professor of Anatomy; L. McLane Tiffany, M.D., Clinical Professor of Oral Surgery; John C. Uhler, M.D., D.D.S., Demonstrator of Mechanical Dentistry; Frank L. Harris, D.D.S., Demonstrator of Operative Dentistry; Randolph Winslow, M.D., Demonstrator of Anatomy. With the exception of the two gentlemen first named, all of the professors are members of the present Faculty of Physic.

Drs. Gorgas and Harris, have been, until recently,

occupants of professorial chairs in the Baltimore Dental College (Dr. Gorgas having been its Dean for many years). The first course of lectures will begin October 2, 1882.

A handsome building, sixty by twenty-five feet, designed for the clinical and mechanical departments, will be erected and ready for occupancy before September 1st.

VIENNA.

(From our Special Correspondent.)

GASTRIC RESECTION.—Billroth did not perform his prospected gastric resection in Bordeaux, as the patient died upon the day of his arrival. The autopsy revealed an error in diagnosis, the stomach being found perfectly normal, while the gall-bladder was filled with calculi.

For the journey, Billroth received 12,000 florins, while 3,000 florins were apportioned to each of his assistants, Drs. Wölfler and Gersnay.

A slight idea of the enormous quantity of operative surgery Billroth performs, can be formed from a recent Sunday forenoon's labor. In that space of time, he removed two ovarian tumors and extirpated two uteri. The four patients survived the operations. His usual daily operation duty at the "Allegemeine Krankenhaus" is two and one-half hours.

RYDYGIER'S FIRST PYLORIC RESECTION FOR GASTRIC ULCER.—The latest communication from Rydygier, who first performed the operation of pyloric resection for carcinoma, gives an account of a similar procedure for ulcus ventriculi.

The patient, a woman 32 years old, had suffered for two years from constantly increasing gastric symptoms. Careful examination led to the diagnosis of ulcus ventriculi in the pyloric region, in consequence of which the pyloric orifice was narrowed, and subsequently, dilatation of the stomach had ensued. The greater curvature extended to the symphysis, the lesser to two fingers' breadth above the umbilicus.

Under the conviction that resection was indicated, the operation was undertaken. Owing to adhesions, a portion of the pancreas was also removed. After the application of Rydygier's elastic compressor, which had formerly proved so useful, the pylorus was resected in such a manner that more was cut away from the posterior wall of the duodenuen than from the anterior, and, indeed, so much that sufficient of the viscus did not extend above the compressor to admit of the application of stitches. A further division of the viscus was impossible on account of adhesions and the compressorium was obliged to be removed.

The unintentional tongue-shaped excision of the duodenal wall was of the greatest advantage, however, in so far that the duodenal extremity was made longer and was turned into the gastric lumen without requiring any further expedient.

The wound was sewed up with two rows of stitches, according to Czerny's method, with catgut—thirty-two inner, thirty-five outer stitches. The approximated edges were covered with iodoform powder.

The slight vomiting after the operation soon ceased.

The highest point to which the temperature rose in the succeeding nine days was 39°–39.3° C. The general condition otherwise was good. Six weeks after the operation the sick woman was discharged cured. Examination of the resected portion of the gastric wall revealed a very marked thickening of all the tissues. Through the narrowed portion it was possible only to pass a No. 9 (English) bougie.

UNIVERSITY OF VIENNA.—During the winter semester just ended, the total number of students in attendance at the University of Vienna was 4,823.

Under the theological faculty, 226 were inscribed; under the legal faculty, 2,240; under the medical faculty, 1,412; under the philosophical faculty, 769; under the pharmaceutical faculty, 176.

Since the winter of 1877–78, the number of students inscribed under the faculty of medicine has doubled itself. This summary does not include the large number of American and English physicians and surgeons coming for purposes of study, who do not usually matriculate.

NEW PROFESSORS.—The latest, best grounded reports as to the future occupants of the vacant professorial chairs are as follows:

In Duchek's place (Chair and Clinic of Internal Medicine), Prof. Erb or Prof. Nothnagel will be called.

In Gratz (Chair of Pathological Anatomy, vacated by Kundrat's removal to Vienna), Docent Weichselbaum, of Vienna, will be selected.

Dr. Chiari will be elected Prosector of the Vienna Pathological Institute.

In Prague (Klebs' Chair of Pathological Anatomy), Eppinger, a former assistant, will be chosen.

Zuckerkandl and Kundrat are already installed.

Arlt in Vienna, Jaksch, in Prague, two of the most famous Austrian clinicians, have openly expressed their intention of retiring from the office of teaching, in the near future.

"Seldom," says a Vienna medical journal, "has a State, in so short a time, been able to exhibit such a change in a body of teachers in a medical faculty, as has been the case with us, in Austria, within the last five years."

PROF. KLEBS received from His Majesty the Emperor of Austria "the highest possible recognition of his excellent scientific labor and skill in teaching," before leaving Prague.

The *Allgemeine Wiener Medizinische Zeitung*, in commenting upon the severe treatment, at the hands of the press and Austrian people, of which Klebs has been the recipient, makes the observation, "those are not the worst fruits which wasps sting."

THE PUBLIC HEALTH.—The following is a brief supplementary report of some of the chief causes of death for the *week ending April 22*. *Small-pox* still continues prevalent in New Orleans; the deaths for the week being 18, or one more than reported the week preceding. There were 4 deaths in Hudson Co., N. J.; 1 death in Brooklyn, and 7 new cases; 1 death each in the District of Columbia and Wheeling, W. Va.; and 2 new cases in Omaha, Neb.

Cerebro-spinal meningitis is much less prevalent in Buffalo, 4 deaths being the entire number reported for the week. There were 2 deaths from this cause in Brooklyn, 2 in Hudson Co., N. J., and 2 in San Francisco.

Diphtheria caused 12 deaths in Brooklyn; 3 each in Hudson Co., N. J., and the District of Columbia; and 1 each in New Orleans and Wheeling, W. Va. From *typhoid fever* there were 4 deaths in New Orleans; 2 each in Brooklyn, Hudson Co., N. J., Buffalo, and Richmond, Va.; and 1 each in the District of Columbia and San Francisco.

Scarlet fever, for some time past very prevalent in Brooklyn, shows a tendency to increase in mortality. The deaths for the week were 34, which is 10 more than the number reported the preceding week. There were 4 deaths from this cause in Hudson Co., N. J.; 3 in San Francisco; 2 in Buffalo; and 1 each in New Orleans, the District of Columbia, Wheeling, W. Va., and Vicksburg. There were 10 deaths from *measles* in Brooklyn during the week.

Consumption caused 44 deaths in Brooklyn; 9 in Hudson Co.; 10 in Buffalo; 18 in the District of Columbia; 24 in San Francisco; and 19 in New Orleans. From *pneumonia*, there were 33 deaths in Brooklyn; 8 each in Hudson Co., N. J., and San Francisco; 9 in Buffalo; 5 in the District of Columbia; and 4 in New Orleans.

For the *week ending April 15*, there were in San Francisco 2 deaths from *diphtheria*, 1 from *small-pox*, 1 from *typhoid fever*, 14 from *consumption*, and 11 from *pneumonia*.

For the *week ending April 29*, the returns of deaths from some of the prominent causes were as follows:

Small-pox.—The reports for the week with respect to this disease, so far as received, are all favorable, with the exception of that received from Cincinnati. In that city the disease is still on the increase, the deaths for the week being 55, the highest number yet recorded. In New York City there were 6 deaths; in Philadelphia and Richmond, each 3; in Chicago, 13; and in Pittsburg and Dayton, each 1 death. Of twenty prominent cities, these are the only ones in which deaths from this disease have occurred. At Pittsburg, 15 new cases of variola and varioloid were reported during the week.

Cerebro-spinal Meningitis.—The mortality from this disease was very light during the week, except in Chicago, where there were 10 deaths. In no other place were over 2 deaths reported from this cause.

Diphtheria.—There were 37 deaths from diphtheria in New York City; 10 in Philadelphia; 6 in Boston; 5 in Cincinnati; and 12 in Chicago. In some few places only a single death is recorded, but in the greater number the disease does not appear on the weekly record.

Scarlet Fever.—A decrease in the mortality from scarlet fever is observed in New York City, but the disease is still very prevalent. In no other place is the mortality excessive. There were 65 deaths in New York City; 9 in Philadelphia; 2 in Boston; 7 in Cincinnati; 3 in Pittsburg; and 2 in Nashville. In no other place is more than 1 death reported for the week.

Typhoid and Typhus Fevers.—There is no decrease in the deaths from typhoid fever in Philadelphia. The number reported for the week was 19, the same as in the preceding week. New York City reports 6 deaths; Boston, Chicago, and Cincinnati, each 4; Wheeling, W. Va., 3; Indianapolis and Louisville, each 2; and Richmond, 1 death. There was 1 death from typhus fever in New York City.

Measles and Whooping-cough.—There were but few deaths reported from either of these diseases, except in New York City. From the former there were 24 deaths, and from the latter 12. In Philadelphia there were 6 deaths from measles and 1 from whooping-cough; in Chicago there were 11 from measles and 4 from whooping-cough.

Consumption and Pneumonia.—Both of these diseases show a falling off in the mortality for the past week. Consumption caused 109 deaths in New York City; 55 in Philadelphia; 37 in Boston; 15 in Cincinnati; 13 in Chicago; 6 in Providence; and 7 in Louisville. From pneumonia, there were 88 deaths in New York City; 39 in Philadelphia; 27 in Chicago; 23 in Boston; 7 in Cincinnati; 4 in Providence; and 6 in Louisville.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending April 22, 1882, indicate that diarrhœa, erysipelas, neuralgia, cerebro-spinal meningitis, bronchitis, typhoid fever, and scarlet fever have increased in area of prevalence. There was no marked decrease of any disease reported. Small-pox was reported present during the week ending April 22, and since, at four places in all, as follows: At Manistee, Flint, and at Detroit, April 22; at Plainwell, Allegan county (three new cases), April 24, 1882.

THE RIBERI PRIZE OF TWENTY THOUSAND FRANCS.—The subject adopted by the Academy of Medicine of Turin for the prize of 1886, is "Embryological Researches for the Advancement of our Knowledge of the Anatomy, Physiology, and Pathology of Man." The competing works, whether already printed or in MS., must be written in Italian, French, or Latin; and the printed works must have been published since 1881. Two copies must be forwarded to the Academy post-free; and if the prize is adjudged to a manuscript essay, this must be published and two copies forwarded before the prize is paid over to the successful candidate.—*Med. Times and Gaz.*, April 8, 1882.

JACKSONIAN PRIZE OF THE ROYAL COLLEGE OF SURGEONS.—The subject for this prize for the present year is "Wounds and other Injuries of Nerves, their Symptoms, Pathology and Treatment," the essays for which must be delivered at the College on or before December 30 next.

DR. J. MARION SIMS has received the decoration of the "Order of Charles the Third," from the King of Spain.

THE DANGER OF HYPNOTIC EXPERIMENTS.—Prof. Harting, of the Utrecht University (*Presse Méd. Belge*, March 5), some years since made a great number of experiments in hypnotism on various animals, as fowls, rabbits, pigeons, guinea-pigs, and frogs. But if hypnotism was induced several times in the same animal, it was found that its nervous system became greatly damaged. "I had six fowls," he says, "which at intervals of two or three days were placed in a state of hypnotism; in about three weeks' time one of these fowls became lame, hemiplegia soon after appeared, and the fowl died. It was the same with the five others, so that in three months they were all dead." These experiments ought to render us very circumspect in inducing hypnotism in man; and Prof. Brown-Séquard, who had repeated Harting's experiments, declares (*Comptes-Rendus*, February 20) that by the provocation in hysterical women of phenomena analogous to those which are so fatal to animals, we risk doing them mischief. As the result of the observations which he has made, he has reason to believe that persons frequently submitted to this kind of influence gradually become perfect *subjects of demonstration*, this indicating that by repetition of the exercise of the pathological functions of the nervous system the disease becomes more and more serious. Therefore it is not desirable that hypnotism or other analogous action should be often practised on hysterical subjects.—*Med. Times and Gaz.*, March 25, 1882.

PTOMAINE.—At the meeting of the Académie de Médicine on March 7, M. Gautier presented a pure specimen of a ptomaine. It was a very caustic, oily liquid, and extremely venomous; one milligramme and a half inserted under the skin of a bird killed it in less than an hour, with paralysis and tetanic convulsions.—*Bull. Gén. de Ther.*, March 30, 1882.

FATAL FLOWERS.—Nottingham is at the present time visited by so serious an epidemic of small-pox that it has been necessary to organize a house-to-house visitation, so as to insure the removal of cases of the disease from over-crowded localities to the hospitals provided for their reception. In the course of the perquisitions, the chief inspector entered one of the "back-to-back" houses, of which there are many in Nottingham, and in which, of course, thorough ventilation is impossible. In one of these tenements, consisting of a common sitting-room and two bed-rooms, occupied

by two families, lived a hawker, his wife, and daughter. The man himself was down with small-pox; his wife was nursing him, and, in the intervals of attending to him, was arranging flowers, which she had purchased for the purpose, into the little bouquets known as "button-holes," and which she was about to try to sell in one of the chief thoroughfares of the town. Needless to say, the inspector bought the flowers from the poor creature, and sent the sick man to hospital; but, as the woman had been selling these bouquets on previous days in the public thoroughfares, it would be hard to say how many apparently mysterious cases of small-pox may not yet appear in Nottingham. The utility of a house-to-house visitation, and of removal to hospital, in time of epidemic, was perhaps never more conclusively demonstrated.—*Brit. Med. Journ.*, March 25, 1882.

Quarantine in the Suez Canal.—At a meeting of the French Academy of Science, M. de Lesseps, who has just returned from Egypt, denounced the quarantine system in the Suez Canal as seriously detrimental to commerce. These regulations, which cooped up thousands of pilgrims returning from Mecca in spots which speedily became fever beds, and which detained so-called suspected vessels without preventing people from landing or embarking, served no useful purpose, nor was there any object in introducing into the East a system disused at home and worthy only of the middle ages. Commerce was obstructed without the public health being secured, for fever beds were thus created, and such arbitrary and clumsy measures would never protect Europe from cholera. He himself was now supposed to be undergoing quarantine in Egypt. He invited the Academy to examine the question and report to the Government. A discussion followed. It was agreed that the matter should be inquired into.—*Brit. Med. Journ.*, April 8, 1882.

Annual Meeting of the Medical Society of New Jersey.—The one hundredth and sixteenth annual meeting of the Medical Society of New Jersey will be held in Educational Hall, at Asbury Park, on Tuesday, 23d inst., at 4 o'clock P. M., and will continue in session the following day. The Grand Avenue House will be in readiness for guests.

New Professors.—Dr. Roswell Park has been elected Lecturer on Surgery in Rush Medical College.

Dr. R. L. Rea has been elected Professor of Surgery in the College of Physicians and Surgeons in Chicago.

Dr. W. T. Belfield has been elected Lecturer on Physiology in Rush Medical College.

Dr. J. H. Long has been elected Professor of General Chemistry in the Chicago Medical College.

A new chair, that of State Medicine and Public Hygiene, has been created in the Chicago Medical College, and Dr. O. C. De Wolfe, Commissioner of Health of Chicago, has been elected to the position.

At the last annual meeting of the Faculty of the Bellevue Hospital Medical College, Dr. Beverley Robinson was duly appointed Professor of Clinical Medicine to that institution, and Dr. Frank H. Bosworth, Professor of Throat Diseases.

St. Louis College for Medical Practitioners.—Arrangements are being made in St. Louis looking towards the establishment of a College for Medical Practitioners. There will be twelve departments so arranged that special courses may be taken with as little loss of time as possible. The positions have not yet been definitely filled, but it is expected that the project will take more definite shape before long.

The Mississippi State Medical Association and the New York Code.—At the recent annual meeting of the Mississippi State Medical Association the following resolutions, introduced by Dr. Benj. F. Kittrell, were unanimously adopted:

Resolved, That we, the members of the Mississippi State Medical Association, view with a feeling of mortification and regret the recent action of the New York State Medical Society whereby permission is granted its members to "meet in consultation *legally* qualified practitioners of medicine" without any further restriction as to their professional or moral status.

Resolved, That, in our judgment, such a policy tends to degrade the enlightened and honorable physician to the level of the ordinary quack and mountebank, and deserves the emphatic condemnation of everyone who properly considers the public and the professional welfare; and, furthermore, the plea of humanity, which is invoked to justify such action, is, in this connection, necessarily specious and false.

The South Carolina Medical Association and the New York Code.—At the meeting of the South Carolina Medical Association, held at Spartanburg, April 26th, on motion of Dr. R. A. Kinlock, of Charleston, the following resolutions were unanimously adopted:

Resolved, That this Association notices, with feelings of regret and mortification, the recent action of its sister society, the Medical Society of the State of New York, in altering its Code of Ethics so as to permit of consultations being held between its members and all so-called irregular practitioners of medicine who may be "*legally* qualified physicians."

Resolved, That science still holds her court in all enlightened lands, and that it has ever been our pride to believe that the qualifications of a true physician come from something more than the enactment of a government or the manipulation of a political machine often known as a legislative body.

Resolved, That medical consultations are properly for the benefit of our patients, and can only be of service through exchange of views and full agreement as to treatment. That no agreement can obtain between an honest scientific physician and an irregular or an advocate of a special system of medicine. To sanction in any way consultations with irregular practitioners would be to undermine our proper organizations and abandon all claim to the honor, the dignity, and the purity which have ever attached to our noble calling.

Resolved, That, as a body enjoying representation in the American Medical Association, we desire now to express our entire satisfaction with the working of the Code of Ethics which has so long, through the efforts of that body, served the respectable physician of our common country, and that we instruct our delegates to the approaching meeting of said Association to use their every influence in sustaining the integrity of the present Code, and in discountenancing the *new departure* of the Medical Society of the State of New York.

The Secretary was instructed to forward copies of these resolutions for publication to The Medical News and to the *Medical Record*.

What is said about the New York Code of Ethics.

The gynecologists, ophthalmologists, otologists, laryngologists and all the other ologists of New York City have, for a long time, looked with longing eyes upon the flourishing clover fields farmed by the homœopaths of that city. They have evidently thought that a fair proportion of the honey derivable from those fields might be brought into their own hives, if the awkward

provision of the old Code, prohibiting consultations with practitioners holding to exclusive dogmas, were only removed. These specialists, the gynecologists in particular, at last decided that "something must be done," and, in February, at the annual meeting of the State Society, they proceeded to do it.—*St. Louis Clinical Record.*

The leaders of this movement in New York have ample reason to feel uncomfortable. In their own school they are almost universally condemned; by homœopaths they are ridiculed; but few, outside of their own clique, approve of their action; the *best* members of the profession uniting in the openly expressed hope that the innovating society shall be debarred from participation in the deliberations of the American Medical Association.—*Medical and Surgical Reporter.*

So far, we can see nothing in the movement but an eye to the mercenary side of our calling.—*North Carolina Medical Journal.*

THE PARIS FACULTY.—By a decree of the Minister of Public Instruction, M. Vulpian, the former Dean of the Faculty of Medicine of Paris, has received the title of Honorary Dean of the Faculty.

DIED.—At St. Louis, on April 28, in the fifty-seventh year of his age, JOHN T. HODGEN, M.D., Professor of Surgical Anatomy in the St. Louis Medical College.

Dr. Hodgen, while attending as a witness in a medico-legal case on the day previous, was obliged to ask to be excused from attendance on account of the severe pain from which he was suffering, and on reaching home was suffering such agony that he was only able to reach his room by crawling up stairs on his hands and knees. He died the following evening. In accordance with his instructions, a post-mortem was made, and disease of the gall-bladder was found.

Dr. Hodgen was a prominent surgeon of the West, and was well known to students of surgical literature by his contributions to the subject of the treatment of fractures; his modification of Smith's anterior splint, which is known by his name, is very generally used. He was elected President of the American Medical Association, and presided at Richmond at the meeting of 1881. He was a man of retiring manner and extreme modesty, and his kindly disposition and honest worth won for him many friends who will sincerely mourn his death.

—— At Morgantown, West Virginia, on the 25th of April, HUGH W. BROCK, M.D., Professor of Anatomy, Physiology, and Hygiene, in the State University.

NOTES AND QUERIES.

VACCINIA IN SWINE.

To the Editor of THE MEDICAL NEWS.

Sir: Is there a disease among swine that is similar to *vaccinia* in the cow and *grease* in the equine family?

If so, are those diseases inter-communicable with one another and *variola?*

I am led to ask the above questions because of the following personal observations: Last November my neighbor, Dr. Harvey, put up a number of hogs, intending to fatten them for slaughtering. It soon became evident that one of them was pregnant; she was separated from the rest, and during the month of January, 1882, gave birth to seven healthy pigs. These all grew and appeared healthy until near one month old, when, in the morning, one was found dead in the pen; this was thrown out. A few mornings later a second death had occurred, and the next morning a third. This sudden course caused a suspicion that something must be wrong, and this carcass was examined.

It was found to be thickly broken out on the lower half of the body and inner sides of the legs, with an eruption that is well represented by a vaccination pustule at about the seventh day; or that stage of pustule when pus is beginning to collect in the outer and upper portion of the rim. The pigs continued to die at about this rate until, in the course of fifteen days, all were gone; the four last were all examined, and showed near the same amount of eruption. All had apparently died at about the same stage of the disease. All died during night-time. None showed signs of sickness during the previous twenty-four hours; although a critical examination was not made during life as to the eruption. These were the only cases of the disease that I know of. The above occurred soon after our small-pox epidemic had subsided.

J. SCHNECK, M.D.

MT. CARMEL, Ill.

[Swine have, as do all of the domesticated animals, their peculiar forms of variola; although I believe it to be in this country, at all events, of comparatively rare occurrence.

Most authorities agree that, although it may be directly developed, its extension by direct contagion is by far the more common cause of its appearance. Nor does there seem to be any doubt but that the variola of the pig may be communicated to mankind, as that of man has been communicated to the pig.

As it may be of interest here, we will shortly describe the symptoms which are pretty constant in their development in the suillæ. "After the febrile phenomena, which are very intense, and continue for some days, there appear on the head, neck, chest, belly, and inner aspect of the thighs, red spots, which are soon transformed into nodules. Towards the sixth day of the disease these become vesicles, and about the ninth or tenth day, pustules; the contents then begin to desiccate, and form a crust which is eliminated in a few days, leaving a well-defined cicatrix. The eruption appears as discrete and confluent." Ths disease most frequently affects young pigs, and an attack confers permanent immunity.

"In its general character, contagiousness, symptoms, course, and terminations, the variola of the pig bears more analogy to human variola than that of any other of the domesticated animals." (Fleming.)

We may say, in addition to the above, that although the horse is subject to variola, and that when the pustules appear on the limbs, from the knees and hocks downwards, it is designated by some as "grease," it should not, by any means, be inferred that all cases of the so called "grease" in horses are variola. In fact, horse-pox is with us extremely rare, while a certain disease of the skin of horses' legs, described by Williams as an eczema, is of common occurrence.—ED.]

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 25 TO MAY 1, 1882.

JAQUETT, G. P., *Major and Surgeon.*—Granted leave of absence for six months on surgeon's certificate of disability.—*G. O. 97, A. G. O., April 27, 1882.*

MAUS, L. M., *Captain and Assistant Surgeon.*—Having reported at these headquarters, will proceed to Fort Lewis, Col., and report to the commanding officer for duty.—*S. O. 86, Department of the Missouri, April 24, 1882.*

PORTER, JOS. Y., *Captain and Assistant Surgeon.*—His leave of absence for one month granted him in S. O. 32, Department of the South, March 14, 1882, extended one month, with permission to apply for a further extension of twenty days.—*S. O. 17, Military Division of the Atlantic, April 25, 1882.*

GARDINER, J. DEB. W., *Captain and Assistant Surgeon.*—Telegraphic instructions of this date, assigning him to duty at Fort Huachuca, Arizona Territory, confirmed.—*S. O. 57, Department of Arizona, April 19, 1882.*

GARDNER, EDWIN B., *Captain and Assistant Surgeon.*—Having reported at these headquarters, is assigned to temporary duty at Vancouver Barracks, Washington Territory.—*S. O. 50, Department of the Columbia, April 14, 1882.*

SHUFELDT, R. W., *Captain and Assistant Surgeon.*—Granted leave of absence for three months, from May 1, 1882. Relieved from duty in the office of the Surgeon General, to take effect May 1, 1882, and, upon expiration of his leave, to report by letter to the Surgeon General.—*S. O. 92, A. G. O., April 21, 1882.*

ROBINSON, S. Q., *Captain and Assistant Surgeon.*—Having reported at these headquarters, is assigned to duty at Fort Spokane, Washington Territory.—*S. O. 50, C. S., Department of the Columbia.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

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ORIGINAL LECTURES.

MÜTTER LECTURES.

ON THE HISTOLOGY OF INFLAMMATION.

Delivered before the College of Physicians of Philadelphia, May 5 and 6, 1882.

BY E. O. SHAKESPEARE, M.D.

ABSTRACT OF LECTURES VI. AND VII.

INFLAMMATION IN THE SEROUS MEMBRANES.

GENTLEMEN: In choosing for the subject of this and the following lecture, inflammation of the serous surfaces, I have been prompted by the desire to continue the examination of the processes of inflammation in tissues removed as far as possible from the domination of the direct influences, whatever they may be, of the blood vascular system. In the cornea and in the cartilages we have seen something of the inflammatory processes at work in absolutely non-vascular structures. In certain portions of the serous membranes we have, oftentimes, comparatively large areas of tissue removed from close proximity to the blood-vessels. In the omentum, in the meso-gastrium, in the mediastinum, and in other locations, we often find series of the fibrous trabeculæ, which form the fenestrated membranes, entirely void of blood-vessels, and more or less remote from a direct communication with them. Moreover, in the endothelial investment of the surfaces and the delicate basement membranes beneath it, we have furnished for our observation elements and structures which, although generally very near the blood capillaries of the subserous connective tissue, may yet be strictly classed as non-vascular. Thus the serous membranes afford opportunities for studying the inflammatory processes in structures which may be said to form the border-land between the so-called vascular and non-vascular tissues.

What is the minute anatomy of these tissues? and what the nature of the cellular elements which are found in and upon them? These questions have been very thoroughly and, in the main, satisfactorily answered through the labors of Recklinghausen, Ludwig and Schweigger Seidel, Schwalbe, Dybkovski, Axel Key and Retzius, Ranvier, Klein, Delafield, and others. And I shall not occupy time in discussing them further than to say that, so far as the abdominal and thoracic cavities are concerned, I accept as generally demonstrable the minute anatomy of these serous membranes as laid down by Klein in his splendid work upon that subject. I have nothing to add beyond the statement that the larger fibrous bundles can usually be shown to be composed of smaller bundles, each of which is in part enwrapped by extremely small flat cell-plates, just as was found for the cornea. Furthermore, the parietal portion of these serous membranes seems to be constituted by a succession of exceedingly thin lamellæ of fibrous tissue, between some of which, oftentimes, more or less extensive and continuous sheets of endothelial cell-plates, in a single layer, can be demonstrated to exist. Especially is this true of the costal pleura, of the parietal pericardium, and of the dura mater.

Before leaving the consideration of the normal histology of the serous membranes, I would call your attention to one or two points which I think have not been much dwelt upon heretofore in relation to the physiological and, perhaps, pathological significance they may possess. What I now suggest has special application to the peritoneum and its normal functions.

It may be considered an established fact, that new lymph spaces, lymphatic nodules and tracts, which are the analogues, both in structure and function, and are often the earliest rudiments of the minutest lymphatic glands, are in the young and growing animal constantly forming and increasing in size throughout the connective tissue existing in the folds of the peritoneum. The new formation of lymph cells is a natural consequent of the development and growth of these minute organs, from the fixed connective tissue cells, after the process which Klein explains. The connective tissue of the mesentery, of the omentum, and of other folds of the peritoneum may therefore very naturally be regarded in one of its aspects as a manufactory, often quite active, of the lymph corpuscles, which through the usual channels are poured into the circulation. And the same may be said, although with less effect, of the new formation of blood, as indicated by both Klein and Ranvier. In fact, the earliest rudiment of the spleen appears in a fold in the peritoneum as a simple lymphatic nodule of microscopic size.

Furthermore, upon the surface of the peritoneum, as is well known, there are met with spots where the endothelia are in an active, formative, or so-called germinal condition. In such a state these fixed cells are capable, by a process of germination or division, of giving birth to lymph cells which become detached from the surface and carried away in the lymph plasma which lines it. Some of this peritoneal fluid is pumped at once through the lymphatics of the diaphragm and forced directly into the thoracic duct, or through another channel into the blood circulation.

In the young and growing animal, in whom the spots of germinating endothelia are often quite numerous, this source of supply of the white elements of the blood may be not inconsiderable.

As to the *inflammatory processes* in the serous membranes, I have very little that is new to offer, and have introduced the consideration of them in these tissues mainly to show that often, if not indeed always, the pathological alterations brought about by inflammation are in many points essentially the same, and are effected in a similar manner, only being more or less complicated by the presence of the emigrated white blood-corpuscle.

The effects of irritants applied to serous surfaces of the lower animals are in many cases, at least in some stages of the inflammatory action artificially established, so nearly identical to those of the intangible morbific agents which excite and aggravate inflammations in the human serous membranes, that we can generally very easily reason from one to the other. The chief cause of what differences there may be in the ultimate courses the inflammation may pursue, is often involved in the circumstance that in the lower animals a strong, vigorous subject, in whom the vital powers are unimpaired, is selected for experiment; whilst, on the other hand, in the human being, it frequently happens that the irritant starts and keeps alive an inflammation in a subject whose vitality is already seriously lowered.

In the first order of cases there is a marked tendency to reparatory inflammation; in the second there is frequently found to be a strong predisposition to destructive and degenerative changes.

By varying the amount and the character of the irritant used to establish an inflammation of the pleura or of the peritoneum, we can, in the lower animals, to some degree regulate the intensity of its action, and thus, almost at will, as it were, procure tissues presenting the various stages of inflammatory action.

Thus a slight inflammation can be established in the peritoneal cavity, which will go no further than an alteration affecting, in the main, the endothelial cells of the surface without an appreciable effusion of serum, or a marked out-wandering of the white cells of the blood. Such an effect is first shown in the germinating cells which already exist in the neighborhood of real and of pseudo-stomata. They are stimulated to much increased activity, followed by the production of lymph corpuscles, and by new cells of the same kind as themselves, which arise in part from the division of cells which at first were in a germinal condition, and in part from a rejuvenation of neighboring old endothelial cells. Thus we have a considerable widening of the areas of germinal cells, and a heaping up of these cells in layers two or more deep. At the same time this change is taking place in the germinal spots already formed, the intervening old endothelial cells in very numerous spots and areas more or less extended are returning to a similar embryonal state, evidenced by increase of nuclei, swelling and division of the cells. It is to be noted that these changes in the investing endothelia are to be seen in those cells which cover the bloodless trabeculæ of fenestrated membranes as well as in those which rest in closer proximity to the blood capillaries.

In those trabeculæ which are void of blood-vessels, as well as in those which are supplied with blood, but no more so, indications of the small flat cells which partly cover the small primary bundles, which constitute the main bundle of fibrous tissue above mentioned, are now sometimes decidedly distinct.

An inflammation of this slight force may pass away and leave no trace, the elements and tissues quickly assuming their former appearances. But if the irritation persist, and keep alive a slow inflammatory action of about the same intensity, the germinating endothelia give rise to thickenings and often to minute polypoid projections from the surface, which at first are formed almost exclusively of cells of the germinating type, but which subsequently may contain newly formed connective tissue and sometimes vessels, whilst at the same time there is an increase in thickness of the subserous connective tissue, which in time will occasionally produce enormous thickening of the membranes. Opposed surfaces may in such cases form organized adhesions.

In this degree of inflammation a decided participation in the processes cannot often be denied for the emigrant cells of the blood, but there can be no question of the efficient agency also of the fixed cells in working the changes.

A more intense irritation involves more rapid changes, which are not then limited mainly to the investing endothelia and superficial connective tissue fibres. The proliferation of the germinal cells is so rapid as to cause an abundant formation of embryonal cells from them; the older endothelia swell up and become loosened and detached from their bed. Moreover, there is abundant emigration from the blood-vessels, and a consequent infiltration of the connective tissues with leucocytes, and they appear also upon the denuded surfaces in great quantities. The blood-plasma soaks the fibrous tissue, whose interspaces are widely distended. *Every cell* in these tissues is at work, the fixed connective tissue cells as well as those minute flat cells to which attention has already been called. They multiply and grow, returning to the embryonal state often at the expense of the adjacent fibrous bundles which are thereby softened and may be dissolved.

Reparation of the injury thus wrought cannot be said to be the result of the activity of any one class of elements. The assumption that of this great mass of cells endowed with embryonal activity, only those which have emigrated from the blood, or are directly descended from them, are the real builders, whilst those derived from the fixed cells of the tissue are merely agents of destruction, I consider to be entirely unwarranted by any facts at hand.

[The lecturer dwelt also to some extent upon inflammation in the pleura, and drew similar deductions.

He again referred to the above-mentioned probable physiological function of the peritoneum, and advanced in this connection the suggestion that the serious consequences which inflammation in the peritoneum so often induces perhaps has some intimate relation to the disturbances of these normal functions of lymph and blood production.]

ORIGINAL ARTICLES.

REPORT OF A CASE OF TRAUMATIC TETANUS, TREATED BY ESERINE; DEATH.

BY CHARLES T. BECK, M.D.,
OF NEW YORK.

WILLIAM W., a well-developed lad of sixteen, accidentally stepped upon a rusty tenpenny nail, March 17. He drew the nail out of his foot, and, making little of the accident, continued at his work until March 24. Feeling only a little stiff and tired, he ascribed his indisposition to constipation, and took a few cathartic pills, which he believed greatly relieved him after operating. During the night his sleep was very restless, and he moaned incessantly. When awakened and asked why he complained, he did not know that he had complained, and said he felt all right. Towards morning, however, the symptoms assumed a more alarming aspect, and by 8 o'clock (March 25) he had the first distinct tetanic seizure. The pain in the epigastric region and the muscular contractions rapidly increased until, about 10 A. M., an extremely violent paroxysm threw him into the opisthotonic posture, in which I found him on my arrival, and from which he never completely recovered. Impelled by his shrieks and imprecations for relief, $\frac{1}{80}$ grain of atropia and ½ grain of morphia sulphate were administered hypodermically. The treatment may be briefly summarized in a few lines, as follows: As soon as the medicine could be obtained from the drug-store, 15 grains of chloral hydrate and 20 grains of bromide of potash were administered every half-hour, until four doses had been given. Seeing no positive effect of the medicine after two hours, the dose of the chloral was increased to ℈j and that of the potash salt ʒss every half-hour, until six more doses had been given. The paroxysms, which still came on every five to six minutes, were, in addition, met by chloroform inhalations. Returning at 6 P. M., the patient seemed somewhat more quiet. The skin was drenched in perspiration; the face flushed; and the pupils were slightly contracted. The respiration was deep and stertorous, and numbered 28 per minute; the pulse numbered 92 per minute; the thermometer

registered 99½°. The convulsions still coming on every eight to ten minutes, and lasting from one to two, it was deemed neither wise nor expedient to push the medicines given further. Seeing the article on "Traumatic Tetanus Treated with Eserine," by Dr. Thomas Layton, in THE MEDICAL NEWS, March 25, this drug was selected, and $\frac{1}{64}$ of a grain prescribed every hour. Not agreeing upon the extent of surgical procedure in a consultation held, the wound was cauterized with strong carbolic acid, and poulticed. The chloroform was retained, to be administered during the attacks.

At 10 P.M., no change being visible—temperature, pulse, and respiration varying mainly according to their proximity to the convulsions, and the pupils being, if anything, slightly dilated—the eserine was advanced to doses of $\frac{1}{48}$ grain every hour. After the second dose the patient seemed somewhat easier, the pupils became slightly contracted, the respirations becoming deeper and fuller, the pulse and temperature more natural. The patient, under this dosage, seemed steadily to improve, and at 1 A.M. (March 26) became quite cheerful, and even asked for nourishment. The convulsive seizures, averaging one in every twelve minutes, became gradually again more severe after 2 A.M., and at 4 A.M. he had grown so bad that I was hastily summoned. When I arrived I found him lying on his abdomen, the head and feet supported in proportion to his opisthotonos. The pupils were *normal;* the face suffused, from the chloroform given; and the skin generally moist. The bowels had moved, and the urine passed with almost every convulsion. Temperature was 100¼° Fahr. The pulse and respiration were most too changeable to be observed, averaging, however, 90 and 30 respectively. The treatment was modified only by giving the eserine in $\frac{1}{48}$-grain doses every half hour.

March 26, 9 A.M.—The pulse and respiration had become more rhythmical and regular again (96 and 32 respectively), the temperature being 101¼°. The pupils were scarcely contracted. The skin was moist, and the face still suffused. The spasms came on every fifteen minutes, and upon the slightest noise; especially, too, when food (milk) or medicine was administered. It was now decided to cut down into the site of the injury, and to carefully explore the wound. An incision about three inches in length was made parallel with the third metatarsal bone, through the spot of the nail's entrance. The whole tract the nail had taken was marked by a blackish discoloration, from which five quite appreciable particles of iron were removed. The wound extending down into the interosseous space was thoroughly swabbed out with strong carbolic acid, dressed with carbolized lint, and poulticed with carbolized meal. The eserine was now pushed to $\frac{1}{36}$ grain every half hour, and the chloroform retained as adjuvant.

2 P.M.—The patient's condition is apparently a little more comfortable. The pupils are slightly contracted; the face is somewhat paler, and the skin moist; temperature 101°; pulse 112; respiration 36 per minute; convulsions returning about one every twelve to fifteen minutes, and growing weaker with the strength of the patient. Increased eserine to $\frac{1}{24}$ grain every half-hour.

5.15 P.M.—Spasms averaging one every fifteen minutes; face still growing to a more ashy color; the skin bedewed with cold sweat, though the thermometer registers 101°. The pulse averages 96 and the respiration 36 per minute. The latter, though regular in rhythm, is accompanied by decided mucous, tracheal, and bronchial râles; and, though pupils were again more natural, it was considered useless to continue the eserine; especially, too, because of the laryngeal spasm and evident hopelessness of the case. To relieve the suffering of the patient, rather than even aim at a cure, fifteen minims of Magendi's solution of morphia were now injected hypodermically every half hour, watching the effects.

Saw him again 10.30 P.M., when he was noticed rapidly sinking, the convulsions coming on, much weakened (like the patient), every twenty to twenty-five minutes. The respiration still numbered about 32 between the spasms; stopped entirely during the spasms; and was somewhat hastened immediately after them. The pupils were neither contracted nor dilated, but failed almost entirely to respond to light. The morphia was administered more cautiously, as also the chloroform. At 2 A.M., March 27, patient had another violent convulsion, in which he died.

Seeing him two hours after death, the body was still warm, quite moist, and the rigor mortis so intense that neither hand nor foot could be moved without moving also the entire body. The left half of the lower lip was fixed between the teeth, and partly bitten through. The pupils were dilated, and the body was also in death in extreme opisthotonos. Re-examining the wound, two more grains of iron were found, the one embedded in the fourth digital branch of the plantaris internus, midway between its origin and bifurcation.

Had the case been seen earlier, and operated upon sooner, he might, in my opinion, have been saved.

A PECULIAR INJURY TO THE HIP-JOINT,

FOLLOWED BY TETANUS AND DEATH—POST-MORTEM EXAMINATION OF THE PARTS.

BY W. H. DALY, M.D.,

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(*Read before the Allegheny Co. Medical Society.*)

THIS pathological specimen of the right hip-joint upon which the following report is based, was the result of an injury so peculiar in character as to merit more than ordinary attention, in a surgical, as well as in a pathological, point of view. The notes from my case-book with reference to it are as follows: Benton J., single, aged twenty-three years; of healthy and vigorous Welsh parents; a native of Pittsburg, Pa.; of temperate habits; nervo-sanguine temperament; rather irritable disposition; very muscular, and powerfully built, weighing one hundred and eighty pounds; light complexion; a member of the paid Fire Department of Pittsburg.

May 2, 1877.—At the sound of the alarm-gong, about daylight, he jumped from his bed with a sudden and powerful bound, alighting on his feet, and at once felt he had hurt his right hip, which sustained the shock of alighting. Thinking it only a slight sprain, he proceeded to dress himself, but with some difficulty.

It may be well to note that the patient was in the habit of sleeping on his left side, and at the sound of the alarm-gong, even while yet asleep, would spring from a lying position on his *left* side to the floor, *never* to the same side, however, but around as it were, describing a more than half circle, by throwing his legs in the air and alighting upon his feet at the other or *right* side of the bed.

This was a force of habit with him, and he had never before failed to make this apparently difficult and circuitous leap, and alight safely and easily upon his feet at the right side of his bed, where his clothing was placed ready at hand to hurriedly dress himself for duty with his engine.

He supposed, but was not positive, that his feet became engaged in the bedclothing when he jumped, hence the accident at this time.

After going across the floor, he learned that the engine with which he was connected was not called out, and at once returned to bed, complaining that he had hurt himself, to which little attention was paid.

Two hours later, he arose, and walked to his boarding-house, *nearly a mile distant*, over the most rugged and uneven pavements in a hilly part of the city. He experienced much pain and difficulty in locomotion, but walked, nevertheless, unaided even by a cane.

Returning to the engine-house after breakfast, he, when dinner-time arrived, repeated the round-trip to his boarding-house, besides walking up and down a high flight of circular stairs at the engine-house some eight or nine times during the course of the day. He complained considerably of pain in the region of the hip-joint of the right side, especially in the anterior region of the joint, and some of his fellow-firemen urged him to send for a surgeon, but feeling that the injury was trivial, he declined, but went to bed, and had some liniment applied to the parts.

3d.—After a somewhat restless night, he found himself unable to rise, and, besides the pain and swelling in his right hip, he complained of feeling sick. Liniments were applied during the day, all the while the swelling and pain increasing, and another night of restlessness and pain followed.

4th.—Suffered considerable pain to-day, but said little about it to the men, and lay quiet in bed all day; had high fever, and drank a great deal of water.

5th.—He thought it proper now to notify the agent of the Accident Insurance Company, with which he had a policy of insurance, who upon inquiring into the case, at once called upon me, as one of the Company's examining surgeons, to visit the man and ascertain the character and extent of his injuries, which I did about noon on the same day.

This brings the history of the case up to the time I first saw it, on the fourth day after the reception of the injury. The patient was lying in the dorsal decubitus on a single bed in the dormitory of the engine-house; his face was flushed; he was very nervous and apparently suffering considerable pain. There was high inflammatory fever, 104¼° Fahr., with pulse 130, full and tense. He could not move the limb, or even bear the weight of my hand laid on the thigh, which was swollen to a circumference 2½ inches greater than its fellow; he grasped me spasmodically at every attempt I made to handle or inspect the injured member. The point of greatest tenderness was directly over the joint anteriorly. Now placing the patient fully under the influence of an anæsthetic, I made a careful examination of his case.

The length of both legs was alike, as measured from the anterior superior spinous process of the ilium to the great trochanter, and from the first-named point to the patella, as well as to the internal malleolus, and also down around the sole of the foot to the middle of the dorsum, the line being drawn from the umbilicus. All these measurements accorded in establishing an absence of deformity in the length of the leg. The mobility of the limb was unimpeded in all directions, and there was an absence of crepitation upon rotating the shaft of the femur upon its axis.

The application of Nélaton's or Roser's test, by drawing a line from the tuber ischii to the anterior superior spinous process of the ilium, brought the apex of the great trochanter directly in line, and negatived a dislocation or fracture of the neck of the femur. There was no inversion or eversion of the toes.

I was consequently assured, whatever the injury, there was neither fracture nor dislocation of the hip; but, from the high local inflammation and grave constitutional condition there was evidently a serious injury to deal with, involving the muscles about, and possibly the ligaments of, the joint.

Explaining to the patient the serious nature of his injury, I admonished him to send for his surgeon. Not having any, he requested me to take professional charge of his case.

Examining now his general condition more fully, with a view of prescribing for him, I found his tongue somewhat swollen and indented at the edges, dryish and clammy, and of a dark-red color. There was a marked tremor about the angles of the mouth and lips, some twitching of the hands, and an indisposition to permit the head to be drawn forward. I ordered Tr. aconiti rad., gtt. iii.; Potass. bromide, grs. xv.; Morphiæ sul., gr. ⅛, to be given every three hours, and a cold lotion of lead and laudanum locally to the thigh from hip to knee, and the whole limb was placed in an easy position.

6th.—Was requested to attend him at his boarding-house, whither he had been removed to secure more perfect quiet and repose, as the noise about the engine-house disturbed him. Here the treatment was continued on general principles, relief from pain being secured to him by means of the anodyne, and the fever kept under control by means of aconite and cooling lotions locally. The tongue, which had, from the 5th to 8th day, been dry and glazed

in the centre, and of a dark-copper color, now, on the 12th of May, has become moist, and nourishment is relished, spirits buoyant and cheerful. He expressed a desire to be assisted out of bed to rest on a reclining chair. He was now able to move the injured leg and unaided raise the heel off the bed. The bowels are regular, and urine passed without difficulty. The patient doing so well as to only require a visit every second day. He was helped out of bed occasionally, and allowed to rest on his reclining chair, with the leg in a comfortable position, from 15th to the 22d of May, or until twenty days after the injury, when, at my visit, I found a decided exacerbation of the fever, and the tenderness which had hitherto been limited to a circumscribed spot just below the origin of the sartorius muscle, or immediately over the joint anteriorly, was now complained of all around the joint.

23d.—The tongue has now become dry and parched again, and of a very darkly glazed appearance; there is no abdominal tenderness whatever; the bowels are tympanitic and confined, but readily become relaxed by the administration of small doses of magnesiæ sulphatis. There is much restlessness and irritability of temper on the part of the patient, and some subsultus tendinum. He complains of a stiff feeling about the submaxillary triangles, and informed me now, with much concern, that he had, when a child, suffered from lockjaw, from running a piece of iron into his foot, and now feared that he would have another attack, from the way he felt. He continually pulled the pillows from under his head and threw them aside, seeming to want his head retracted and low, and would bury it deeply into the pillow on a lower plane than his back. He was now entirely helpless in every limb and muscle, and wore an anxious expression; in fact, there is now opisthotonos and some spasmodic breathing; pulse, 130 and full; tongue dry; mind clear but irritable; urine copious; and bowels torpid, but respond to saline cathartics. At my suggestion, arrangements are made to have the advice of counsel the next day, and in the meantime the present remedies are pushed more boldly. The tincture aconite rad. was ordered in three-drop doses every hour till fever abates, and the anodyne given every hour until clonic spasm of muscles is relaxed, and the following morning he was much better. Pulse, 90; tongue moist; the patient more cheerful.

24th.—Dr. A. M. Pollock met me in consultation, and the temperature in axilla showed only 99° Fahr., the patient declared he felt first-rate; ten grains chloral hydrate were added to each dose of anodyne, and the same treatment carried on with continued amelioration of the constitutional symptoms and increase of comfort, with the exception of some pain, immediately following the handling of the injured limb in the examination of it by Dr. Pollock, who made a careful inspection for the detection of fracture or dislocation, with negative results. Delirium present first time on the 28th of May, twenty-six days after the injury. With this advent there was another change for the worse. Fever increased; nervous excitement greater; and retention of urine. The use of the catheter was resorted to twice a day, and the same line of treatment pursued, with comfort to the patient, and still fair prospects continuing of the patient's future recovery; Dr. Pollock attending the patient in conjunction with me.

31st.—About 9 P.M. I was called in haste, and found him breathing with considerable difficulty, gritting his teeth violently, and with his head retracted into the pillow in a violent spasmodic manner for a few seconds at a time; mind tolerably clear, but very anxious; temper, irritable, and an occasional rambling, incoherent remark. He complained of a choking sensation about the top of the sternum, and continually tried to swallow something that seemed to gather in his throat. The injured limb was hot and painful to the touch; the tissues all round the joint were hard, but the swelling somewhat diminished. An increase in his anodyne gave him a comfortable night's rest, and he was easier in the morning.

June 1.—His condition is improved this morning, having slept well. Nourishment taken with a relish, and during the day he rested comfortably except when his leg was handled. A bed-sore about the size of a silver dollar was now discovered over the sacrum. A general loss of muscular power is very apparent now.

2d.—He began passing his urine without the aid of the catheter again, his tongue has again become moist, and mind more cheerful and clear; temperature 99° Fahr., but the leg about the thigh has now become flattened anteriorly, and the prominence over the trochanter more marked, the foot of the injured leg now becomes decidedly everted when unsupported, and the whole limb bears the appearance of paralysis; the cellular tissue about the knee is puffy, and fluctuates, but not that fluctuation which denotes the presence of pus. Neither is there fluctuation at any point denoting the presence of pus.

The patient asks for the anodyne, and seems comfortable while under its influence, and fretful when not.

5th.—I find, again, a marked change for the worse. The pulse is 135, full and bounding; delirium great; tongue dry; articulation tremulous and difficult; feces and urine passed in the bed involuntarily. Treatment continued.

6th.—Dr. F. Le Moyne is called in consultation. The temperature is now 104°; treatment continued; aconite increased, but no impression is made upon the circulation, which is 135 per minute, in fact the patient is fast sinking into a moribund condition. His breathing is labored, quick, and choking; his head is retracted, with tetanic opisthotonos; and there are repeated efforts to eject a thick tenacious mucus from the windpipe, which are unavailing.

Death occurred at 4 o'clock on June 7th, from tetanus, thirty-six days after the reception of the injury, and, upon consent of his parents, an *autopsy* was made 24 hours after death, in which I was kindly assisted by my friend, Dr. F. Le Moyne, and Mr. Stone, student of medicine. The dead subject presents a frame closely knit and powerfully muscular, although emaciation had gone on to a great extent, especially in the legs, which have become reduced fully one-quarter in size.

Rigor mortis marked; and extensive suggillations over the entire posterior surface of the body; a bed-sore, as large as the top of a coffee-cup, over the sacrum.

An incision was carried in a curvilinear direction, from a point midway between the trochanter and anterior superior spinous process of the ilium, down over the trochanter, and along over the shaft of the femur. The head of the femur was found in place in its socket, and the capsular ligament unruptured, the veins, nerves, and other soft tissues, all about the joint, were highly inflamed, and extravasated blood, with some clots and serum, found between the muscles, which were softened and easily broken down, and of a pale color. There was no pus either *within* or *without* the joint, or in the tissues. The ligamentum teres was found ruptured from its acetabular attachment. The posterior superior circumference of the articular surface of the head of the femur bears the evidence of a severe contusion of about two inches long and one inch wide, and from the effects of inflammation and ulcerative absorption, is soft and friable to the depth of one-quarter inch at this point. The corresponding surface of the socket bears evidence of similar violence, and at these points the cartilage is entirely absorbed, and the bone rough, soft, and friable, and generally inflamed, though not softened at any other point nor showing any lesion.

The head of femur at point of injury looks to the eye as though it had received a smart blow with a heavy hammer or iron bar, and excites considerable marvel as to how so severe an injury could be inflicted in such a manner, apparently requiring a force to produce it that would fracture any ordinary bone. The bones in this subject are, unusually large and strong, and the injury sustained bears ample evidence of the fact. Inflammatory action has loosened the articular fibro-cartilage around the seat of injury upon the head of the bone, so that I can peel it off like the rind from an orange.

When I hold the parts in the position in which they must have been when the injury was sustained, it is evident that the shock must have been received by alighting with the entire weight of the body upon the right leg in a position of abduction to half its limit from the axis of the body, and the upper rim or border of the acetabulum, with the superincumbent weight of the body, has, in this act, crushed this furrow into the head of the femur so deeply as to admit the distal phalanx of my thumb, disclosing little more than half of its dorsal portion. Then, of course, subsequent absorption has deepened the cavity.

This case is one of unusual interest, and I know of no similar one hitherto recorded. It has a high clinical and diagnostic value, showing that, even with positive evidence of absence of either dislocation or fracture, we may yet have an injury of far more serious moment than either. What is most astonishing in the clinical history of the case, is that the man walked more than four miles the day after the injury with a ruptured ligamentum teres, and a segment of the head of the femur destroyed.

MEDICAL PROGRESS.

OÖPHORECTOMY.—At the last meeting of the London Obstetrical Society, two extraordinary cases of oöphorectomy were related by DR. BRAITHWAITE, of Leeds. In each case one ovary was removed. The first patient was pale and in bad general health, and suffered from dyspnœa dependent on mitral disease. Menstruation was normal. The left ovary was prolapsed and tender on pressure, and it was inferred that the dyspnœa was in some way dependent on the condition of the ovary. Accordingly, the ovary was removed, with the result that the dyspnœa was considerably relieved. It appears that the patient is now in the Leeds Infirmary, the subject of cardiac dropsy. The second patient was a healthy-looking but hysterical woman, who had suffered from constant pain in the left ovarian region since the birth of her first child, nearly four years previously. She had had three children since. The left ovary was prolapsed and tender; it was removed, with complete relief. It is not uncommon nowadays to refer all manner of aches and pains to some abnormal condition of the uterus and ovaries, and that with little or no evidence; but this is the first time we have heard of dyspnœa, depending on heart disease in a patient pale and out of health, being referred to an ovarian disorder, and we fail to discover in the report of the case the slightest evidence for such a view. The second case was clearly one of hysteria, and the physician should have made due allowance for this when estimating her hysterical description of her suffering. In the course of the discussion on the paper, Dr. Hickinbotham, of Birmingham, pointed out, and with reason, that the relief which followed the operation in the case of heart disease was not due to the removal of the ovary, but to the rest and general treatment the patient had had—an explanation which is in accordance with our daily experience in the treatment of heart disease in women without removal of an ovary, and in men without removal of the testicle. What would be said to a proposal to remove the left testicle in a man for dyspnœa dependent on cardiac disease? Dr. Hickinbotham made another statement of the highest importance in its bearing on the operation of oöphorectomy as a curative measure in certain diseases. He said he had been lately called to see a patient from whom the ovaries had been removed two years ago for ovarian pain and hysteria, and found that, although the ovarian pain had been relieved, the hysterical attacks were still of the most severe character. It is not often that we find the condition of spayed women recorded after due time has elapsed since the operation: the cases have been generally published before the ultimate result was known. We have on more than one occasion pointed out that cases so published are of no value in estimating the therapeutic effects of the operation. In Dr. Braithwaite's cases a few months only had elapsed since the ovaries were removed.—*Lancet*, April 22, 1882.

REMOVAL OF BOTH OVARIES FOR INSANITY.—DR. T. B. WILKERSON successfully performed in a young woman nineteen years of age, in August, 1880, the operation of oöphorectomy for insanity, with marked erotic tendencies, of two years' duration. The patient recovered from the operation in three weeks, and in three months sanity was perfectly restored. In a letter to us, under date January 6, 1882, Dr. Wilkerson writes: "I am happy to state that she remains in excellent health, and that she is mentally and physically perfectly restored by the operation. There has been no palling of any of the charms that beautify the female, no change of voice, nor is there any atrophy of the mammæ noted. She is fond of society, gay and lively." —*Amer. Journ. of Insanity*, April, 1882.

THE BACILLI TUBERCULOSIS.—KOCH describes the bacilli of tuberculosis as follows: They are rod-shaped, very slender, and about one-fourth or one-third as long as the diameter of a red blood corpuscle, though longer ones are occasionally met with. They are distinguished from the bacilli lepræ, which they somewhat resemble, by being somewhat narrower and more pointed at the ends, and are not stained by Weigert's process.—*Berliner klin. Woch.*, April 10, 1882.

The micro-bacteria described by BAUMGARTEN, when examined separately, resemble in most points the Bacterium termo, though they are somewhat longer and narrowed, and not so sharply contoured; at the ends, instead of being gently rounded, or even pointed as Koch claims, they are often faintly knobbed or club-shaped, or they may be strictly cylindrical in shape. They, moreover, are almost never grouped in pairs, and never occur in the zoöglœa form. Finally they are distinguished from the ordinary forms of putrefactive bacteria in that they cannot be demonstrated by Weigert's process of staining, even when assisted by Koch's method of illumination. They, therefore, differ from the chains of micrococci found by Aufrecht in tubercular nodules, not only in the locality of their occurrence—the latter being confined to the centre of the nodules—but also in the facts that they never occur in groups, and are from three to six times as long as they are broad, the length of Aufrecht's bacteria being only twice as great as their breadth. The only method by means of which Baumgarten has been successful in detecting the presence of these bacteria, is by treating the section with dilute soda or potash solution. In old alcoholic preparations, even when treated by this process, they are to be detected with difficulty or not at all; but when the tubercular masses are taken from a freshly killed animal, hardened for twenty-four hours in absolute alcohol, and then treated as above indicated, the desired result is easily obtained.—*Centralb. f. d. Med. Wissen.*, April 22, 1882.

THE COAT-SLEEVE METHOD OF AMPUTATION.—At a meeting of the Medical Society of London, held April 3, MR. RICHARD DAVY read a paper on the Coat-sleeve Method of Amputation, which he stated consisted in making a circular integumental flap from three to five inches long. After tying or twisting the bleeding vessels, the sleeve of skin is tied up by passing two ends of a tape through a cylinder, and fixing them with a safety pin. Mr. Davy had practised the operation three times, and one of the patients was shown. He laid stress on the fact that only skin, fat, and fascia were of use in making a good pad for the end of a stump. He considered that the advantages of this method were—(1) The conservation of an abundance of skin, fat, and areolar tissue, which are utilized, so that the scar is reduced to a minimum and the cushions to a maximum. (2) The total abolition of sutures, which are generally painful on removal. Sutures as previously applied in a circular amputation necessitated a linear cicatrix on the face of the stump. (3) The facility for restraining and escaping secondary hæmorrhage. (4) Freedom from pain, exclusion of air, and easy application of drainage. (5) The symmetrical appearance and utility of the stump.—*Lancet*, April 15, 1882.

ASEPTIC VACCINE LYMPH.—Much practical interest attaches to the subject treated in the *Jahrbuch für Kinderheilkunde*, Neue Folge, Band xvii. p. 172, by Dr. R. Pott, who gives the results obtained by him in experimenting with vaccine lymph modified by combination with salicylic, boracic, and carbolic acids. The mixtures employed consisted of salicylic solution (1 to 300), boracic acid solution (3.5 per cent.), and carbolic acid solution (1 to 5 per cent.), each of these being combined with an equal part of humanized lymph. All proved active except the 5 per cent. carbolic acid solution. This result corresponds with that obtained by Dr. Braidwood and Mr. Vacher in their more extensive and carefully prosecuted experiments detailed in their second and third reports to the Scientific Grants Committee of the British Medical Association. We do not learn from Dr. Pott his method of procedure, the amount of care he bestowed on testing the inoculative efficacy of the vaccine he used, his manner of mixing it with the antiseptic solution, the length of time during which the vaccine was exposed to the antiseptic influences before inoculation, the cleanliness of the instruments he used, and other such details. On the other hand, Dr. Braidwood and Mr. Vacher have insisted on the great importance of using special instruments for each set of experiments; on the necessity of testing the efficacy of the vaccine itself before drawing inferences from its action when mixed with antiseptic solutions; on the influence of lengthened contact with the antiseptic, especially in the case of carbolic acid; and on the falsity connected with the ordinary manner of conducting such experiments by inoculating a subject on the one arm with vaccine, and on the other with the experimental fluid. In their second report, they state "that a saturated solution of salicylic acid does not impair the efficacy of the vaccine contagium;" and that a saturated solution of boracic acid "impairs the vitality of vaccine contagium little if at all, even after having been kept some days in contact with the contagium-particles." On the other hand (in their first report), their conclusions in regard to the influence of carbolic acid on the vitality of vaccine were "(*a*) that the immediate inoculation of a mixture of vaccine and a moderately strong solution (1 to 20 aq.) of carbolic acid succeeds in a certain number of instances; (*b*) that such a mixture, preserved for some time, seventeen days to six weeks, fails to produce vesicles;" and that the mixture of vaccine with stronger solutions of the acid, and likewise with carbolate of glycerine, "destroys the efficacy of vaccine." They have further distinctly proven that antiseptics in the gaseous state are much more potent destroyers of the vitality of vaccine than are such in solution or in fluid form. Dr. R. Pott claims the following advantages for these aseptic lymphs: 1. The "erysipelatous poison" contained in the lymph is probably destroyed, and the early vaccinal erysipelas in this way prevented; 2. Such lymph may be kept for years without spoiling; 3. The lymph is thinner, and contains no fibrinous coagula. To us, these inferences appear strange and illogical. We are not aware that the "erysipelatous poison" has yet been demonstrated; but we know that Jenner laid down the axiom (and the every-day experience of public vaccinators in England has proven its correctness) that *no* areola should surround the vesicles on the eighth day, and that the redness which appears on the ninth to the eleventh days after vaccination should be evanescent. When post-vaccinal erysipelas occurs, this is not to be ascribed to the vaccine, but to its admixture with blood, epithelium, or impurities from the skin; or to the employment of uncleansed instruments for the operation; occasionally to defective sanitary arrangements. That vaccine may, by the aid of these antiseptics, retain its vitality "for years" we very much doubt. On the other hand, Dr. W. Husband (in his essay on the subject) states that vaccine, properly secured in his capillary tubes, has been known to retain its efficacy for "seven years." Lastly, if a vaccinator desire to render his lymph thinner, and to free it from fibrinous coagula, he has merely to dilute it with glycerine, or with a mixture of glycerine and water, in order to obtain his desire. This last form of commixture, we are informed, is frequently carried out by the public vaccinator in Berlin, who con-

siders that by this means he renders his vaccine lymph more pure.—*Brit. Med. Journ.*, April 22, 1882.

APHTHOUS VULVITIS.—PROF. PARROT treats this affection, when occurring in young infants, by painting the vulva each day with a thick layer of iodoform, a small amount of charpie being inserted between the labiæ to prevent their adherence. After the first application the ulcerations begin to improve.—*Union Méd.*, March 16, 1882.

TREATMENT OF CANCER OF THE UTERUS.—DR. W. H. BAKER has recently described a method of operation for cancer of the uterus which unites the advantages of several methods while discarding their objectionable features. If the case be suitable for operation and the disease is limited to parts which can be entirely removed, the patient being etherized and placed in the Sims' position, the cervix is seized with the volcellum forceps and dragged down as nearly to the outlet as possible. The portio vaginalis is then cut into anteriorly with the scissors, and the supravaginal cervix anteriorly is separated from the bladder with the scissors, aided by the forefinger in tearing the tissues.

The same incision is then made into the vagina posteriorly, and the supravaginal cervix separated from the peritoneum up to the level of the internal os uteri. The anterior and posterior incisions being now connected by lateral ones, and the supravaginal cervix separated on the sides in the same manner as was done in front and behind, the uterotome is substituted for the scissors, and a funnel-shaped portion of the body of the uterus cut out. The actual cautery, at a red heat, is then applied to the whole denuded surface.

The advantages claimed for this method of operation are:

1. More of the uterus can be removed than by any other previously described method where any of it is left.

2. All subsequent disturbance of the patient for the changing or removal of dressings, or for examination of the parts, is unnecessary until complete convalescence is established.

3. The operation is less severe, and consequently accompanied by less danger, than any of those for the removal of the whole organ.

4. The steps of its performance are more simple and easy than in those operations where the total extirpation of the organ is practised. It is, therefore, more practicable for the general surgeon.

5. The length of respite from the disease is greater than in any cases known where the entire uterus has been removed.

In review, he presents the following points:

1. In all uterine cases, do not neglect to remove all sources of local irritation, especially lacerations or frictions of the cervix uteri with eversion.

2. Make an early specular examination of all cases presenting any of the rational signs of cancer.

3. In all doubtful cases make the diagnosis positive, if possible, by a microscopical examination of a section removed.

4. The diagnosis of cancer established, do not delay the operation, which must be thorough, removing if possible every portion of the disease, though it be necessary to open the peritoneum or the bladder to accomplish it.

5. Submit the portions removed to the microscope to be absolutely sure that all the diseased tissue has been cut away.

6. When necessary to remove any part of the cervix, remove the whole, infra- and supra-vaginal.

7. Make a specular examination of all cases operated on, every month or two for some years; and if any reappearance of the disease be discovered, do not delay the use of the sharp curette and the thermocautery.

8. Do not attempt a radical operation where there is evidence that the disease has been constitutional from the start, or where it has become so by a too long delay of its primary performance.—*Amer. Journ. of Obstet.*, April, 1882.

CASE OF FARCY.—MR. STANLEY BOYD, at the meeting of the Pathological Society of London held April 22, 1882, exhibited some microscopic specimens showing the cutaneous changes in farcy. The patient had been a stableman, aged eighteen, and some of the horses he served were glandered. On August 1, he experienced rigors, joint pains, and great *malaise;* a week later, an abscess formed on the head of the left fibula; on August 18, the left eye began to swell and became closed. When admitted into University College Hospital, on August 23, there was a large sloughy ulcer on the left leg where the abscess had been; there were a few pustules on the right cheek, an abscess over the wrist, and several circumscribed red patches on the limbs; the left eye was much projected, the whole left temporal fossa was swollen, but no pus could be obtained in the orbit or fossa by the aspirator. The temperature ranged from 101° to 103°, and he was delirious. The pustular rash spread rapidly, and the contents of the pustules became bloody; there was no discharge from the anterior nares, but there was frequent expectoration of a sanio-purulent fluid. Before death, which occurred on the twenty-sixth day of the disease, the right eyelids began to swell, the left cornea lost its polish, the respirations rose to 44, and he became semi-comatose; the temperature rose to 108° Fahr. two hours and a half before he died. At the post-mortem examination there was purulent inflammation of both ankles and knees, and among the deep fibres of the temporal muscle on the left side, and among the muscles of the orbit; in the lungs were numerous abscesses, varying in size from a millet-seed to a filbert; on the upper surface of the liver was an abscess the size of an orange; the kidneys were in a condition of cloudy swelling; a few pustules were found about the pharynx, near the orifice of the larynx. Mr. Boyd remarked that the accounts given in the text-books of the microscopical anatomy of farcy buds were unsatisfactory; he believed the pustules were really small abscesses in the superficial layer of the skin, and differed from the small-pox pustules, in which the effusion occurred into the rete Malpighii, destruction of the papillæ, if it occurred, being secondary.—*Med. Times and Gaz.*, April 22, 1882.

THE THERAPEUTIC ACTION OF ZINC.—DR. TESTA draws the following conclusions from his experiments made with a twenty per cent. solution of sulphate of zinc injected hypodermically:

1. Zinc possesses a marked action on the heart; it diminishes the force of cardiac contraction and reduces blood pressure. It then causes an increase in blood pressure by direct action on the blood-vessels, causing their contraction.

2. Zinc acts on the intra-cardiac termination of the pneumogastric nerve; and,

3. Causes arrest of the heart in diastole.

4. It diminishes peripheral sensibility up to complete anæsthesia, and causes motor paralysis.

5. Zinc reduces the excitability of the nervous system, and is indicated in convulsive neuropathies; it also reduces utero-ovarian hyperæmia, and is indicated in hysteria.

6. It is also indicated in nervous palpitations.—*Bull. Gén. de Thér.*, Feb. 15, 1882.

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SATURDAY, MAY 13, 1882.

THE BACILLUS TUBERCULOSIS THE CAUSE OF TUBERCLE.

THE important investigations of KOCH on the bacillus tuberculosis, which we had the pleasure of laying before our readers in this country in advance of any other journal, are attracting considerable attention in professional and lay circles. The following further details of these studies will be read with interest.

In a careful microscopical examination of tubercular organs of man and the lower animals, Koch says he has never failed to observe in large quantity minute rod-like organisms embedded in the tubercular matter. In order to prove that it is these organisms which constitute the contagium of tubercle, and that it is not an unorganized virus present with the organisms in the tubercular mass, he cultivated the *bacilli* artificially and through several successive generations. This he accomplished in the usual manner, by taking a small particle of a tubercular human lung and placing it in a fluid suitable for the growth of the *bacilli*. The proper composition of the culture fluid for this form of bacillus was not attained without some difficulty; and it was also found that the *bacillus* grew and was reproduced only at a temperature of from 84° to 104° F., thus differing from the *bacillus anthracis*, which can be propagated at the ordinary temperature of the atmosphere. A drop of the fluid in which the tubercular *bacilli* had been allowed to multiply was next transferred to a new portion of the culture fluid, and the bacilli again allowed to develop. A drop of this second fluid was, after some time, mixed with a third portion of culture fluid, and once more the bacilli were permitted to multiply. This was repeated as often as was desired. Koch employed from the fifth to the eighth generation of bacilli, freed in this manner from any unorganized virus with which they might have been originally associated, and injected them into the peritoneal sac or into the aqueous humour of a large number of animals. In one instance in which four out of six healthy guinea-pigs were inoculated with the fifth artificially propagated generation of bacilli from a tubercular human lung, tubercular disease of a severe character set in in all the four inoculated guinea-pigs, while the remaining two continued perfectly healthy. In the infected animals, the spleen, liver, and lungs were found studded with tubercles. Several experiments of a similar kind were made with other animals, and with differently derived tubercular *bacilli*, and invariably with the same result. The inoculated animals suffered and sometimes died from tubercular disease, while the uninoculated remained healthy. Control experiments were made by injecting serum into the aqueous humour of the eye, instead of injecting the fluid containing the *bacilli*, but the former were never followed by tubercular deposits in any part of the body of the animal.

Koch has also examined for *bacilli* the expectoration of people suffering from pulmonary phthisis, and has found them in great abundance. Such a sputum, when injected into the circulation of an animal, quickly produced tubercular disease. The expectoration, on the other hand, of non-phthisical individuals contained no bacilli, and did not injure the health of an animal inoculated with it. Another point of considerable interest for the practitioner is, that the bacilli do not lose their vitality when dried; for phthisical sputum which had been kept dry for two, four, or eight weeks, was as capable as ever of producing tubercle in animals into which it had been injected. Koch's observations are, therefore, of the greatest value; and with the precise knowledge of the contagium of tubercle which he has placed at our disposal, if fully confirmed, we will be warranted in believing that we are within measureable distance of preventing and arresting one of the most fatal maladies to which the human race is subject.

Other *bacilli* succumb to the toxic action of many of the antiseptics; the bacilli of tubercle will doubtless prove no exception. The main difficulty will lie with the impermeability of the non-vascular tubercular nodule, in which the bacilli are embedded, to the antiseptics. With a sufficiently volatile and diffusive antiseptic this difficulty may be overcome, and tubercle be placed among the more curable diseases.

In the *Centralblatt f. d. Med. Wissen.*, April 15, which has just come to hand, PROF. BAUMGARTEN,

of Königsberg, claims, after two years of fruitless study, to have at length succeeded in detecting innumerable masses of genuine rod bacteria, not only in the centre, but also in the periphery of tubercular nodules produced in animals by inoculation of tuberculous matter, and in cases of human tuberculosis of the pleura and pericardium. In 1880, in the *Berliner klin. Wochen.*, he suggested that tuberculosis was due to a parasitic organism, but that he had not yet been able, by actual inspection, to verify his opinion.

Baumgarten dates his communication April 3—Koch's paper having appeared on March 30—and states that, two weeks before Koch's paper was published, he had already demonstrated the existence of the bacterium of tuberculosis.

His methods differ from those of Koch, and his description of the organisms is not identical, but the two accounts sufficiently coincide to render it probable that the same object is referred to, and the independence of the methods and similarity of results serve to render the remarkable observations of both Koch and Baumgarten worthy of greater confidence.

These researches are already meeting with varied criticism. The *Lancet*, in the issue of April 22, devotes an editorial to Koch's discovery of the specific parasite of tubercle. In the course of this article Koch's researches are spoken of with the utmost respect, and are characterized as having been "conducted with admirable care."

Another London contemporary of the same date, *The Medical Times and Gazette*, casts an abundance of cold water on these researches, ridicules their results and discredits the methods employed in staining and in the process of "culture."

Prof. Tyndall, in a letter to the *London Times*, calls the attention of the English scientific public to Koch's researches. He praises, in terms which may be considered even extravagant, the remarkable achievement.

The time has not yet come for a definite statement of the reality of the observations, or of the genuineness of the discovery. If other observers, pursuing Koch's method of staining, arrive at the same results; if the parasite thus detected shall be successfully cultivated; if inoculation of the parasite shall produce tuberculosis, the discovery will be confirmed at all points, and take its place amongst the most remarkable in medical science.

THE DUTY OF HOSPITAL SURGEONS IN ACCIDENT CASES.

A RECENT case at the Presbyterian Hospital in this city serves very well to illustrate the annoyances and wrongs to which hospital surgeons are often subjected, and suggests a brief discussion of their relations to such patients.

A man who had had both legs crushed at noon, on the Pennsylvania Railroad, some miles out of town, was brought to the hospital. Dr. O. H. Allis, the visiting surgeon, was notified by the surgical interne, at 5 P. M. on his arrival, and from the note he learned that there was no hæmorrhage or other imminent danger. The rule of the hospital is, that no capital operation shall be done, save in emergencies, without a consultation of the visiting staff. Accordingly, Dr. Allis called such a consultation for 8.30 P. M., the earliest practicable moment. At that hour the consultation was held. The man had reacted only partially, his pulse being feeble and intermittent, and his sleep profound from the administration of morphia, of which it seems that from four to six grains had been given(!) before his arrival, by the physicians that brought him to the hospital. Evidently it had been imperfectly absorbed, for, although so well narcotized it was deemed necessary to give him digitalis and the thirtieth of a grain of atropia, he was not absolutely poisoned. In view of the nature of the accident, the time that had passed, and his semi-unconscious condition, the surgeons decided to operate rather than to wait for full reaction. Double amputation was therefore done at once; as the patient was fully impressed by the morphia, only a trifling amount of ether was administered, and this with great caution. There was no loss of blood and apparently no additional shock. Dr. Allis stayed with him till midnight. He died at 3 A.M. An attempt was made at the Coroner's inquest to show neglect, by the allegation that immediate amputation, on his arrival, might have averted the fatal issue. Any surgeon of experience will instantly see that to amputate both legs of a man who had been shaken up by a rail-road and cobble-stone ride of some hours, immediately on his arrival, would be simply to kill the patient. The question would rather be, whether it would not have been better either to postpone the operation until full reaction and recovery from the overdose of morphia, or possibly even to let him die without any operative interference whatever.

Now note the following facts. A gentleman of experience, skill, and reputation, who receives no salary whatever for his services, is called late in the day, gives up any and all engagements, or pleasures, or duties to his family, his friends, his other patients, or himself, spends his evening up to midnight in the service of an entire stranger, oftentimes (though not in this case) a worthless tramp, deprives himself of rest until long past midnight, makes a serious draft on his physical resources, with three or four of his professional brethren, who also make similar sacrifices of time, and ease, and sleep, he uses his best judgment, the result of years of accumulated

experience; and all for what? To be compelled to leave his private business to attend the Coroner's inquest, to be harassed and worried by the false assertion that he had neglected a patient, and even mayhap had caused his death; and to have all this commented upon the next morning at ten thousand breakfast tables, to the prejudice of his fame and fortune for years afterwards.

The community should understand that in many, nay in most, cases it is better to wait till partial or complete reaction has come on before any operation is done; that delay for some hours, often till the next day, is the wisest thing to do, that every hospital has resident doctors of good judgment, who will arrest bleeding, change the clothing if need be, administer proper food and stimulants, give the patient rest and quiet in order to favor reaction, in a word, do just what he needs. And, moreover, in view of these facts, it is neither reasonable nor just to expect that overworked and unpaid men of the highest reputation and skill should be compelled instantly to drop all their other duties and other patients and attend to this one alone, one who meanwhile is well cared for, and who will probably be the better for rest and time. If such constant exactions are to be made on the time and strength of hospital surgeons, the public must not expect that the best men can be had. They are too busy and too much sought after to drop everything at every call. Less busy second-rate men must be selected for the post, and if so, it need not be said that the patients will be in the end worse off with a Jones or a Brown, rather than with a Gross or an Agnew, even if Jones or Brown can go on the instant, and Agnew and Gross cannot always do so.

Moreover, it must not be forgotten that private patients have rights. True they do not make the stir that a hospital patient can before a board of managers and in the newspapers. But none the less must they be properly attended to. Even if they do pay, they must not be neglected in favor of charity patients.

We would on no account be understood as underrating the value of life or of comfort to hospital patients; they deserve the best care we can justly give them. But we assert that they do not demand the same quick attention that private patients do, inasmuch as they have skilled physicians and nurses instantly at hand, as private patients have not; and that neither the necessities of the case, nor the welfare of the patient, neither justice to the surgeon, nor to his private patients, demand that he shall sacrifice everything else the instant he is called.

HISTOZYME.

UNDER the above title, PROF. SCHMIEDEBERG describes, *Archiv für experimentelle Pathologie und Pharmacologie*, Vol. xiv. p. 379, *Ueber Spaltungen und Synthesen im Thierkörper*, a ferment which he supposes to exercise an important function in normal nutrition, decomposing the principal nitrogenous compounds of the tissues. He further concludes that this ferment, when present in excessive quantity, excites a febrile condition. He finds, on injecting a solution of histozyme into the blood of dogs, it causes a decided fever, with the usual systemic state and diarrhœa.

The investigations leading to this interesting and important discovery extended over several years. The first step consisted in the discovery by Schmiedeberg and Bunge, several years ago, that of all the organs of the dog, the kidneys only had the power to form hippuric acid from glycocoll and benzoic acid. More recently Schmiedeberg has ascertained that the kidneys of the hog possessed in a high degree the power to oxidize benzylamine and transform it into benzoic acid. The contradiction which has seemed to exist in the observed facts, and which consists in the power that the same organ has exercised to decompose certain chemical bodies, and construct others synthetically, led him to the conclusion that there must be a soluble ferment in the kidneys capable of effecting these decompositions. In fact, Schmiedeberg finally came to prepare this soluble ferment which he found in considerable quantity in the blood of the hog and also in the kidneys of the same animal, and in the liver of the dog. The ferment is prepared by grinding up the organs and extracting with glycerine or water by the aid of pressure. The filtered extract is precipitated by the ninth or tenth part of its volume of absolute alcohol, and the precipitate is thrown on a filter and dried over sulphuric acid. The aqueous solution of the ferment thus prepared is very active, and rapidly decomposes great quantities of hippuric acid. That it possesses pyrogenic properties, is an important fact. It may prove hereafter that histozyme in excess is the great factor in the production of fever.

"THE CURSE OF CHLORAL."

THE *Lancet* of April 22, under the above caption, alludes to the sad effect of chloral-taking on the artist-poet, Dante Rossetti. Suffering from that "curse of the artistic and poetic temperament, insomnia," he began to get the relief which chloral brings, only to experience greater evils in a horrible nervousness, irritability, and depression of the vegetative functions. The peculiar sensitiveness exhibited by Rossetti in his later years; his gradual withdrawal from the social circle which his presence formerly delighted, and his entire surrender to melancholy, were, unhappily, the results of chloral sleep. Physicians, instructed by such sad experi-

ences, should be discreet in prescribing chloral for nervous and literary persons suffering from wakefulness. This symptom signifies some violated hygienic principle, some remediable bodily derangement, which, corrected, natural sleep would follow. If the brain is once drowned in the chloral sleep, the remedy seems so grateful that the organ refuses to be comforted in any other way when the horrible insomnia asserts itself again. It is not alone the habit of forcing sleep by the narcotic which is so much to be dreaded. Chloral injures the cells of the gray matter of the cerebrum, weakens the heart, sets up structural changes in the liver, and impairs the nutrition generally. It is sad enough to witness in these cases the decay of the bodily powers, but more lamentable are the psychical derangements which render the incarceration of so many of these subjects in asylums finally necessary.

Especially cautious in prescribing chloral should be American physicians, whose clients, immersed in the ceaseless activity of life here, are peculiarly apt to suffer from insomnia. To them, an agent which forces sleep, despite the conditions inducing wakefulness, is peculiarly grateful. In making haste to be rich, all other considerations must yield. The time for the necessary repose cannot be given; the modifications required in the daily life for the healthful performance of the cerebral functions are too irksome; the relief must be given without interference with the daily methods, and, therefore, how opportune the action of chloral. It can scarcely surprise us that, under such circumstances, the physician, despairing of better methods, falls in with the use of an agent which postpones troublesome questions to a future time. Our asylum statistics, showing the baleful effects of chloral, indicate at the same time the need of less questionable ways of attacking that restlessness of the mind, insomnia and irritability, which are preludes to psychical derangements.

THE ASSASSINATION OF LORD FREDERICK CAVENDISH.

THE shameful murder of Lord Frederick Cavendish and Mr. Burke, which has aroused the just indignation of the civilized world, is, in all probability, only another instance added to the many with which history abounds of the contagiousness, or rather, the epidemic character, of crime.

It seems evident from the circumstances of the case, that no personal motive, either of greed or revenge, actuated the assassins, and it must be equally evident to every intelligent observer of recent events, that in the entire range of possible crimes nothing could have more seriously jeopardized the best interests and future fate of Ireland. Indeed, as regards Lord Frederick Cavendish, the selection of a victim, even when viewed from a nihilistic standpoint, was so palpably in opposition to the dictates of common sense, as to indicate the existence of some impelling cause other than those which ordinarily actuate criminals.

Fortunately the absence of reasonable motive is no longer regarded as, in itself, an excuse for crime or as evidence of irresponsibility. It is true that Esquirol says, "the victims of the criminal are those who oppose his desire or his wishes; the victims of the monomaniac are among those who are either indifferent to, or who are the most dear to him;" and that in homicidal mania, "it is difficult to imagine a rational motive for the deed." Both these conditions would seem at first sight to prevail in the present instance, but it would undoubtedly be necessary to adduce other and more convincing testimony as to mental unsoundness, before the horror and detestation with which these guilty wretches are regarded, or the punishment which, it is to be hoped will speedily overtake them, are in the slightest degree abated.

The explanation of this shocking assassination will probably be found, however, in the influence which criminal example always has upon certain individuals in every community. Suicide by a peculiar method, or even in a particular locality, is speedily imitated and repeated; a new poison once introduced and made notorious through the daily press, is soon heard of as the occasional cause of death over an entire country; Taylor records the fact that immediately after the first suicide took place from the monument near London bridge, a second and a third followed. During the French Revolution, parricide, fratricide, and other unnatural crimes, became exceedingly frequent; acts of incendiarism have repeatedly been known to lead to the commission of arson in the same or adjoining districts; in fact, instances of the rapid succession of crimes of almost any special character might be multiplied indefinitely. Of late years the particular development of this extraordinary form of criminality, which has been of the greatest interest and importance to the world at large, has been found in various attempts upon the lives of conspicuous members of the governing class. In most of these, whatever principles may have seemed to be involved, and whatever acts of injustice or oppression may have preceded the crime, the actual perpetrator of the deed has been in no way interested in the removal of the victim; and in several instances, as in the cases of Lincoln, of Garfield, and in this last most deplorable occurrence, the person destroyed was one whose life would manifestly have been of the greatest value, not only to his country and to civilization, but even to the very class to which his murderers belonged.

Sir J. Stephen has stated that in such cases "experience has clearly shown that there is no check so

effectual as the rigorous application of the law," and we sincerely trust that in the present instance this principle will be unhesitatingly applied.

WE would call renewed attention to the fact that the excellent Directory, established by the College of Physicians, will be opened for the convenience of the profession and the public on next Monday, the 15th instant, and in doing so we would urge upon all the importance of its instant and constant use. Already, in fact, though so imperfectly organized, it has supplied a number of nurses. We are informed that a number of calls have been made during the past two weeks for *wet-nurses*, of whom none are as yet registered. We ask especial attention to the fact, as the hot weather will be quickly upon us, during which time the demand for wet-nurses is greatest. Physicians will do a great service, if they will send immediately all the wet-nurses they can to register at the Directory. No registration fee is required of this class of nurses.

THREE weeks have elapsed, and neither the names nor the letters of those "influential men in every part of the country" who have sent "the heartiest endorsements of the course of the *Record* in its advocacy of freedom in consultations" have yet been published. We trust that these names will be no longer withheld from the profession, which is eager to know who of its "influential" members are advocating the New York Code.

SPECIAL ARTICLE.

THE MEDICAL NEWS COMMISSION

ON THE

MANAGEMENT OF VACCINE FARMS AND ON THE PROPAGATION OF BOVINE VIRUS.

(*Continued from p. 499.*)

TRUE ANIMAL VACCINATION,

Or "heifer-transmitted cow-pox vaccination," has been very clearly defined to be "the inoculation of a young selected animal of the bovine species, from an *original spontaneous case of cow-pox;* from this others, and so on in continuous and endless series, as a source, and the *only source*, of virus to be used for the protection of the human race from variolous disease."[1] Virus obtained from this source only can be said to be strictly and exclusively animal. As regards the origin of the native vaccine disease, several theories have been advanced, but the question as yet has not been definitely determined. Though full of scientific interest as this question is, it need not further concern us in inquiring into the propagation of bovine virus, our only subject of inquiry here.

[1] Report on Animal Vaccination, American Medical Association, 1877. The italics are our own.

When an original stock of virus of the highest excellence, like the Beaugency, is discovered it should be perpetuated by animal vaccination with almost religious care; and to do this it is necessary that it should be placed in the hands of careful and properly accomplished operators. The frequent occurrence of severe inflammation, ulceration, and even erysipelas, at the seat of insertion of bovine virus, clearly indicate that much of the virus in use has not been propagated with sufficient care and skill, for such results are not produced by pure animal lymph. Dr. Martin says, "When I first began to use the animal vaccine it was with fear and trembling, from my apprehension of undue violence, and, above all, of erysipelatous complication. The absolute absence of erysipelas as a complication of animal vaccination was, therefore, far from expected." Certain it is, that the normal products of the animal do not give rise to such results, for butchers are not specially subject to erysipelatous and other forms of inflammation around wounds and sores. How, then, can we account for these evil results, which are by far too common to be denied? First, it is not improbable that some producers are using as vaccinifers, old and, perhaps, tuberculous cows. We are told that old cows can be made to yield lymph very abundantly, and that vaccinations performed with virus obtained from them are very liable to be attended by excessive inflammatory action. In times of extraordinary demand for vaccine virus, such as we have just experienced, it is altogether probable that ignorant and unprincipled producers, who follow the specialty as a mere trade, make use of animals which will yield the greatest possible quantity of virus, having no regard for its quality, except that it must be sure to "take," *i. e.*, make a sore arm. Again, if the animal after inoculation be not properly cared for, and be allowed to lie down in wet and filth, the vesicles are very apt to be associated with an inordinate degree of inflammation. Virus collected under such circumstances is very liable to contain inflammatory products, and must frequently give rise to undesirable results in the human subject. The danger of conveying inflammatory products by vaccine virus was fully appreciated by Jenner, who, observing the frequent occurrence of spurious vaccinia from this cause, was led to enunciate what has ever since been called the "golden rule," viz., "*never to take the virus from a vaccine pustule for the purpose of inoculation after the efflorescence is formed around it.*" So fully impressed was Jenner with the importance of this rule, that he subsequently made the injunction still more emphatic by saying, "*I wish this efflorescence to be considered as a sacred boundary, over which the lancet should never pass.*"

METHOD OF COLLECTING THE VIRUS.

It is obvious, therefore, that it is not only important that the animals should be kept in clean and well-ventilated stables, and the inoculated surface sedulously guarded against the irritating influence of decomposing stable *débris*, but that the virus should be collected at the proper time, and particularly before the vesicles have reached too late a

stage of development. It is very probably true, as elsewhere stated, that up to a certain stage "the unbroken vesicle contains no superadded products, and will convey cow-pox uncomplicated. Later, when granular and pus cells appear, and above all, when the ruptured vesicle becomes the seat of septic and other bacteria, the virus cannot be sent out with the same confidence."[1]

The "patented cones," and all other vaccination compounds, appear to be more liable to be followed by phlegmonous inflammation and erysipelas than when pure lymph is used. Besides the large number of cases in which serious complications of this kind followed the use of "cones" at Thomasville, Ga., we have learned of some very similar results following their use in this city, in the hands of at least two of the public vaccinators. We have also been informed quite recently that Chief Engineer Whittaker, U. S. N., who died March 10, 1881, from erysipelas following vaccination, was vaccinated from one of the "patented cones." It is proper to state, however, in this connection, that Surgeon Kershner, in charge of the case, does not believe that the erysipelas was caused by the vaccinnation, because the latter had passed the stage of inflammation before the former set in.

There are other forms of so-called preserved vaccine made use of in some other countries, which have also given rise to serious accidents. We refer to the use of "pustules" which have been cut out of the animal. According to Warlomont's description, "The little tumor (vesicle) is seized with a fold of skin; it is excised by dividing it with a bistoury slightly curved on the flat; it is placed between two thick glasses, one having a small concavity for its reception, and is thus sent out to greater or less distances. *A priori*, this method, no longer in use, except in Italy, is already practically condemned; the occurrence at San Quireio gave it a fatal blow. Thirty-eight children, vaccinated in the heat of summer, by means of similar fragments of flesh, which, by the testimony of the vaccinators themselves, exhaled an abnormal odor, were seized with eclampsia and extensive phlegmonous inflammations, and many of them died." These results tended to bring this practice into disrepute; "but the method, which really consists in employing, under another form, the parenchyma of the pustules, still enjoys a certain amount of favor under the name of Milanese vaccine." The following is given as Dr. Colonel Saggini's description of the latter preparation: "In the first place, I should inform you that at Milan they always use full-grown animals, mostly cows; for the committee cannot procure calves, veal being excluded from Milanese dinner-tables. M. Nobli excises the pustules between the sixth and seventh days. He cuts through the thickness of the skin as far as the subcutaneous cellular tissue, to give greater consistence to the fragment; then fixes it by one end with a pin on to a small piece of wood, with the bleeding surface downwards. He then scrapes the entire pustule with a knife, until he has removed all the detritus; then breaks up all the parenchyma with the same knife, and adds some drops of glycerine. The mixture thus made is preserved in close vessels, in a refrigerator, and sold. It has the appearance of a soft, brown paste." Dr. Warlomont has tried this preparation, with, as we might suppose, very unfavorable results. He says, "Whether in the calf or in the infant, the insertion of this matter, rich in animal particles, nearly always gives rise to phlegmonous and eczematous pustules. Inexperienced vaccinators think these to be 'splendid pustules;' we consider them to be of bad quality, and their evolution is frequently accompanied by inflammatory complications."

The Milanese plan has been tried with this improvement—the vesicles have been raised on the pincers and scraped, without their excision; but the undesirable results from the virus obtained by this improved method have not been materially different. The plan offers to the merely mercenary producer very strong temptations, for it affords very great facility of collecting virus, and is thoroughly economical, utilizing, as it does, the entire parenchyma of the vesicle. All these faulty methods of collecting and preserving bovine virus cannot be too strongly condemned, since they tend to bring animal vaccination unjustly into disrepute. Nothing is easier than to obtain virus of the highest degree of excellence, without having recourse to the "Roman pustules," "Milanese marmalade," or the "patented cones."

(*To be continued.*)

[1] National Board of Health Bulletin, April 1, 1882.

REVIEWS.

ELEMENTS OF PHARMACY, MATERIA MEDICA, AND THERAPEUTICS. By WILLIAM WHITLA, M.D., etc. 12mo. pp. 524. London: Henry Renshaw, 1882.

THIS is a useful book. Within a convenient compass it gives a very good account of pharmaceutical manipulations, of the materia medica, and of therapeutics. The pharmacy is sufficient for the medical student and practitioner, and the therapeutics embrace the modern views. Thirty pages are devoted to prescription writing. Printed in red ink are six pages containing the "non-official remedies." On the whole the matter is fairly accurate, but we have noted some errors. Thus, on page 86, it is stated "extractum colocynthidis compositum is so called because the colocynth pulp ordered in it is first made into an extract with proof spirit, and the insoluble part rejected." *Dubórsea*, on page 220, is printed for Duboisia.

NEUROLOGISCHES CENTRALBLATT. UEBERSICHT DER LEISTUNGEN AUF DEM GEBIETE DER ANATOMIE, PHYSIOLOGIE, PATHOLOGIE UND THERAPIE DES NERVENSYSTEMS, EINSCHLIESSLICH DER GEISTESKRANKHEITEN. Herausgegeben von DR. E. MENDEL, Privatdocent an der Universität Berlin.

THE NEUROLOGICAL CENTRALBLATT, A REVIEW OF THE WORK DONE IN THE DOMAIN OF THE ANATOMY, PHYSIOLOGY, PATHOLOGY AND THERAPY OF THE NERVOUS SYSTEM, INCLUDING MENTAL DISEASES. Edited by DR. E. MENDEL, etc.

THE first number of this new candidate for professional favor has just been received. It is published at

Leipsig by Veit & Co., at the price of 12 marks a year. Two numbers are issued monthly.

The first number contains twenty-four pages, and has two original communications, the first from Prof. Dr. A. Eulenburg, of Greifswald, well known in neurological literature, and the other from Dr. Th. Rumpf, of Düsseldorf. Under the division *Referate*, contributions to contemporary literature in the several departments of Anatomy, Physiology, Pathology, and Therapy, and of Mental Diseases, are carefully analyzed. In this review, we find Italian, French, and English papers noticed more or less fully, but the bulk of it is made up from German sources. As a whole this is a promising venture in the wide field of neurological medicine, and as such we commend it to the attention of our readers interested in this department of knowledge.

SOCIETY PROCEEDINGS.

SOUTH CAROLINA MEDICAL ASSOCIATION.

Thirty-Second Annual Session, held at Spartanburg, April 25 and 26, 1882.

(Specially reported for THE MEDICAL NEWS.)

THE thirty-second annual meeting of the South Carolina Medical Association was held at the Merchants' Hotel, in Spartanburg, April 25th and 26th, the President, DR. F. L. PARKER, of Charleston, in the chair. The meeting was well attended, and twenty-six new members were added to the roll.

The President delivered the Annual Address, and chose for his subject

PRIMARY AND SECONDARY REUNION OF DIVIDED NERVES BY SUTURE.

Referring to a case of nerve reunion by suture, which he had exhibited at the last meeting of the Association, Dr. Parker went on to say that, though he knew such operations from the exceptional nature of the injury were very rare, yet he was under the impression, at the time he operated, that he had seen reports in the journals of a number of similar cases, and had so stated before the Association, but erroneously. He had found the same impression existed among other surgeons, but yet no one could tell him where to find these cases. Reports of cases of nerve-stretching, or cases of subsequent restoration of nerve function some months or years after the injury, or cases of nerve resection for neuralgia, with subsequent reunion, had evidently been confused with cases of the reunion of divided nerve trunks by primary or secondary operations, only a few cases of which have been reported, most of them in England, but none in this country, so far as he had been able to ascertain, previous to the one referred to above.

Dr. Parker then proceeded to give the statistics of all the cases of this operation which he had been able to find on record, of which the following is a summary. Twenty-three cases in all were reported of nerve reunion; twenty-one by suture, and two from simple apposition. Of these, twelve were successful, two partially successful (sensation, but not motion, restored), four incomplete, and five unsuccessful.

Of the twenty-one cases of reunion by suture, six were primary, and fifteen secondary. Of the six primary, two were successful, two were incomplete, and two unsuccessful. Of the fifteen secondary, six were successful, three incomplete, and six unsuccessful.

In five cases the sutures were passed through the sheath, in three through the substance of the nerve, and in thirteen it is not stated how they were passed.

The secondary operations were performed from one to nine months after the injury, and in one case two years after, but in the last unsuccessfully.

Failure in cases of secondary operation depends upon several contingencies, which cannot be foretold prior to exposing the nerve. Among these may be mentioned—

1st. The degree of atrophy of one or both ends, particularly the distal end, preventing their adequate adjustment.

2d. The length and size of the neuroma on one or both ends, requiring a sacrifice of nerve tissue, and complicating apposition by forced stretching or wide dissection.

3d. Atrophy of the neurilemma, forcing the operator to suture through the substance.

4th. Neuritis or sclerosis of the distal or central end.

5th. Mutilation of the nerve ends after resection often unavoidable.

6th. The manner of healing of the wound and the degree of suppuration.

These, and perhaps other, considerations are important in estimating the chances of success. Dr. Parker then gave the history of his own case as follows:

CASE 1.—"Paralysis of extensor muscles of hand and forearm, from division of the posterior interosseous nerve; complete recovery by resection and reunion of ends of divided nerve with carbolized catgut sutures."[1] This case was reported last year, but is reinserted here to complete the list of such cases, and to call attention to certain points in its history of interest in connection with the process of cure.

The age of the patient was fourteen years. There was complete paralysis of all muscles supplied by the posterior interosseous nerve and its branches. Sensation was normal over the back of the arm and hand. The temperature was diminished, evident to the touch. The operation was performed three months after the injury. The ends of the nerve were united by two catgut sutures through the *substance* of the nerve. A superficial abscess formed in the track of the wound. Electricity was applied twenty-one days after the operation, with muscular reaction. On the fifty-first day the patient could extend the wrist, and in about four months he had regained the use of the wrist and all his fingers, except the thumb, and at the end of seven months there was complete restoration of all the functions of the arm and hand, and one was as strong as the other. Examined last month, the functions of the arm and hand were found to be perfect in every respect, but a keloid growth had formed in the cicatrix of the wound, and was painful when struck. There was also a similar growth in the cicatrix of a superficial wound on the other arm, which seemed to show a constitutional predisposition in the patient to keloid. No interference was deemed necessary.

CASE 2.—John C., of Abbeville, S. C., aged 18, robust, was cut with a knife on the outer border of the attachment of the deltoid muscle, December 11, 1880, followed by immediate paralysis of sensation and motion in the regions supplied by the musculo-spiral nerve and its branches; the wrist dropped and the fingers were flexed. The wound was dressed, the arm flexed, and put in a sling.

July 15, 1881, the patient first seen by Dr. Parker. Paralysis of sensation and motion had continued; there was wasting and flattening of the arm, forearm, and hand. On applying electricity, sensation and motion were found to be absent throughout the distribution of the musculo-spiral nerve. The temperature of the hand and wrist was much diminished, and capillary stagnation was marked over these parts. At the centre of the cicatrix the nerve was very sensitive to pressure. Electricity was used from July 15th to 21st without any improvement. July 22d, seven months

[1] See Transactions of South Carolina Medical Association for 1881.

and ten days after the injury, an incision was made three and a half inches long, afterwards increased to five and a half, and the nerve exposed on the belly of the triceps muscle near the junction of the middle and outer heads. The ends were found to be united by a large, olive-shaped, hard neuroma, three-quarters of an inch long, of a red color, which bulged on the lower side of the nerve. The upper end was of normal size, but more flattened than usual; the lower end was atrophied to one-half the natural size. The neuroma was excised along with a small portion of nerve-tissue on either side, and the upper and lower ends were dissected gently from the surrounding cellular tissue throughout the extent of the wound, in order to avoid stretching in bringing the ends together. The separated ends were then united by two fine catgut sutures, but, owing to the difference of their diameters, the cut surface of the upper one could not be brought in apposition throughout its whole extent with that of the lower, but necessarily overlapped it. The use of Esmarch's bandage greatly facilitated the operation. The wound having been brought together with silver sutures, was dressed antiseptically, and the arm was supported on pillows in the extended position, so as to avoid tension on the nerve. The next day the patient complained of pain in the wrist from its dropping; a splint with a ball for the palm was applied, which gave relief. The wound healed by first intention. August 5th, electricity was applied, with response in both sensation and motion, in the extensors of the fingers, and sensation in the thumb, but no motion; no motion of extensors of the wrist. The nerve had evidently united. He was ordered friction with soap liniment twice a day, and electricity was applied for fifteen minutes daily, with a gentle current.

Aug. 10th (twenty-fourth day), the extensors of the fingers and thumb were gradually improving; he could extend his fingers half way, and had considerable motion in the extensors of the thumb. The wrist was not so flexed, and the pain over the joint had lessened. He had no power yet over the extensors of the wrist, but slight muscular contractions in all the extensor muscles were evident; the pronators were also beginning to act. The splint supporting the hand was removed on this day, but was reapplied the next, as it was more comfortable. In both these cases the patient complained more of pain from the dropping of the wrist after the operation than before, perhaps from the tension of the newly-united nerve.

Aug. 21st (thirty-fifth day). The treatment by electricity, friction, and the splint having been kept up, there had been daily slight improvement. Sensation was partly restored throughout the radial distribution; the fingers could be extended about half way; the thumb was not so far advanced, only the extensor secundi internodii acting, with motion in the last phalanx. The wrist was nearly straight, probably from the support, and though the extensors (the radial more than the ulnar) responded feebly to electricity, there was no voluntary muscular motion in them.

The patient at this time, in spite of protest, was ordered home by his father, and had not been seen since by Dr. Parker. He had heard, however, that while sensation was restored, and there was good motion in the thumb and fingers, there had been no improvement in the voluntary movements of the wrist. The case can only be reported, therefore, as partially successful.[1]

A careful study of this case will probably throw much light upon our future procedure in similar cases. For instance, the question will arise, How long must we wait for nature to restore the union and function of nerves. The best authorities state that generally a year elapses in cases of secondary reunion of nerves before any restoration of function is observed. Yet in the case reported, after a lapse of seven months from the date of injury, the distal end of the nerve was atrophied to nearly one-half its original size. What would have been its condition after twelve months? Would it not then be better, if the evidences of primary reunion are not satisfactory in two weeks or a month, to act promptly, and unite the ends by suture, and thus avoid the certainty of atrophy, with the doubtful possibility of secondary reunion?

Dr. Parker, in his closing remarks, gave some minute directions for performing the operation, with the view of lessening, as much as possible, the disturbance of the nerve elements. He also referred to the bearing of this operation upon the prophylactic treatment of tetanus by division of nerves leading to the wounded part, to be afterwards united by suture.

DR. P. A. WILHITE, of Anderson, read a paper on

COFFEE AND ITS EFFECTS.

Coffee was a stimulant, chiefly of the nervous system, producing wakefulness. It moderately excites the circulation and stimulates the digestive system. If taken in large doses, its after-effects are depressing to the nervous system, equivalent to the previous excitement. It cannot be that a substance so energetic in its action on the human frame is destitute of deleterious properties. The writer is of opinion that strong coffee, used to excess, will promote, if not cause, gout; that its continued use seriously impairs the blood, irritates the kidneys, congests the liver, deranges the nervous system, paralyzes digestion, causing acidity, heartburn, watchfulness, tremor, debility, dejection of spirits, etc., and is also a slow poison. As a rule, men are not so susceptible to it as women.

His attention had been first directed to this subject during our late war. Prior to that he had attended many ladies who were sick and complaining almost all the time of a complication of nervous troubles, and he almost invariably found that to this class of patients belonged those who imagined they could not live without their coffee. But during the war many of them could not procure this life-saving beverage, and yet almost all of them became comparatively healthy and strong before the close of the war. He could cite many instances of such recoveries that had come under his own observation.

POISONING BY CICUTA MACULATA.

DR. J. WM. FOLK read a report of a case of poisoning with the root of this plant, mistaken for angelica. Symptoms: Delirium, cold skin, profuse perspiration; pulse 46, thready and scarcely perceptible; vomiting blood and mucus, countenance haggard and pale, complete prostration. Treatment: Hypodermic injection of morph. sulph., gr. ss; sinapisms, and friction with flannel saturated with hot brandy. Brandy and aromatic spirits of ammonia given internally as soon as the stomach would bear them. Patient recovered consciousness in about an hour, after which he gradually got better.

DR. R. A. KINLOCH, of Charleston, reported a case of

GUNSHOT WOUND OF ABDOMEN TREATED BY OPENING THE CAVITY AND SUTURING THE INTESTINES.

Amos Ray, colored, male, adult; admitted into the City Hospital November 1, 1881, suffering from a wound in the abdomen caused by a Colt's pistol, calibre 32; orifice of entrance midway between umbilicus and pubes, a little to the left of the median line. There

[1] Since the above was written, Dr. Parker has seen his patient, and finds him improving steadily. The extensors of the wrist are now acting, the atrophy is lessening, and the arm becoming round and full. He confidently expects a cure will be effected in about six months more.

was general abdominal pain, and inability to pass water, with symptoms of slight shock. At 7.30 P.M., nine hours and a half after the accident, the patient was examined by Dr. Kinloch. The abdomen was slightly swollen and tender, and pain was complained of at the end of the spinal column just above the anus. An examination per rectum disclosed an orifice in the posterior wall of the gut, corresponding with a depression in the os sacrum. Dr. Kinloch determined upon an operation as offering the best chance under the gloomy prognosis.

At 9 P.M. the operation was performed under carbolic spray and with full antiseptic precautions. The cavity was opened by an incision in the median line from the umbilicus nearly to the pubes. The intestines having been turned out and carefully examined, five perforations were found in the small gut and two in the mesentery; the wound in the rectum could not be discovered. The wounds in the intestines, after their edges had been trimmed with the scissors, were all closed with fine carbolized silk sutures. Two small vessels were ligated. There was considerable blood in the cavity, but very little fecal matter. The cavity was carefully sponged out with a two per cent. carbolized solution, and the abdominal wound closed with silver sutures except at the lower angle, where a rubber drainage tube was inserted. Carbolized oiled lint, several layers of borated absorbent cotton, and a broad bandage completed the dressing. The patient was ordered opium, gr.j, every four hours, hot bottles to the extremities, and pellets of ice to be given ad libitum.

November 2, 9 A.M.—Patient in good spirits, has no pain, but is troubled with hiccough. Pulse strong, 116. Temperature 100.2°. Dressing removed, and abdomen sponged off with carbolized water. Drainage tube replaced by one of larger calibre. Cavity washed out with a two per cent. solution of salicylic acid, and the dressing reapplied. Opium, gr.j, to be given every three hours.

12 M.—Condition unchanged. Asked for nourishment. Allowed a spoonful of milk and lime-water every hour.

6 P.M.—Changed for the worse. Abdomen very tympanitic and weak. Pulse 128, weak. Temperature 100.2°. Cavity washed out again.

11 P.M.—Patient sinking. Pulse 170, scarcely perceptible. Extremities cold, and surface generally bathed in a cold sweat.

3*d*, 2.15 A.M.—Patient expired.

The *autopsy* revealed five or six perforations of the mesentery and omentum, and four of the intestines, two orifices of entrance and two of exit. All the openings had been closed except one, which had escaped detection. The ball had passed downwards and slightly to the right, entering the rectum just below the recto-vesical fold, traversing the sacro-coccygeal articulation, scaling off a piece of the sacrum, and embedding itself in the glutei muscles, from which it was extracted. There was very little fecal matter in the abdominal cavity, but some bloody serum. The whole mass of the small intestines exhibited signs of acute inflammation, and here and there presented ecchymotic patches.

In the case now presented, the diagnosis of intestinal wound was fully established before operation, as was also the direction and course of the ball. This in part determined him to adopt the active or heroic practice. While it added another to the list of fatal cases under similar treatment, it did not alter his belief in the correctness of the practice in the class of injuries presenting so grave a prognosis, and he looked forward to better results than had been so far obtained. Listerism, and much of the knowledge acquired from ovariotomy, will embolden many surgeons, who up to this time have favored the passive policy in the treatment of intestinal wounds.

From the report, it will be seen that one of the perforations of the intestine was overlooked at the time of the operation, which would be regarded by some as necessarily fatal. He did not think this a legitimate conclusion. Where drainage can be insured, and the cavity washed out, this danger can be successfully met and overcome. His failure to find the wound in the rectum, which he knew to exist, was provided for by the drainage tube. He did not think that an open wound of the intestine was the cause of death. The lateness of the operation, eleven hours after the injury, militated against its success, and the numerous perforations of the gut perhaps rendered it impossible. The patient suffered but little pain after the operation, and the opening of the abdominal cavity seemed to alleviate suffering, if it did not save life.

DR. KINLOCH also read a report of a case of

FRACTURE OF THE SKULL, TREATED BY TREPHINING; DEATH FROM ABSCESS.

He exhibited several interesting pathological specimens, amongst which were the uterus and hypertrophied ovaries removed by operation from a case of fibro-cystic degeneration of these organs.

DR. W. T. C. BATES, of Columbia, reported the following case of

TRAUMATIC TETANUS FROM VACCINATION.

Ben Jones, a mulatto, aged fifteen years, was vaccinated February 9, at my office, at the insertion of the deltoid of the left arm, with carefully selected humanized virus. March 8, one month after vaccination, he was again brought to my office, complaining of a pain in his stomach, and an inability to open his mouth. His body and neck were bent backwards; the muscles of the back and chest, the masseter and internal pterygoid, were in a state of partial rigidity. There was incomplete trismus and some embarrassment of respiration. Here was evidently a case of tetanus. A most careful inquiry into the history of the case, and a searching examination of the body revealed nothing to cause it, except a small healthy looking, painless ulcer at the spot where vaccination had been performed a month before.

The next day the patient was examined by Drs. Talley and Howe. Trismus more pronounced. The case terminated fatally after fifteen days in spite of all treatment. I have thought it proper to report this case, as a matter of professional interest, and because I believed that a formal presentation of it was becoming, after it received the notice of the secular press, and was freely commented upon by non-professionals in this community.

DR. J. R. BRATTON, of Yorkville, reported the following case of

CONGENITAL GANGRENE.

Some years ago, during the war, Mrs. F., about twenty-five years of age, a healthy, well-developed woman, a primipara, was delivered, after a very easy natural labor, of a well-developed female child, healthy in all respects, except the left hand and forearm. Upon the palmar and dorsal aspect of the hand, as well as upon the flexor and extensor surfaces of the arm, about its middle third, were patches of gangrene of the integument and subjacent cellular tissue, irregular in form, and about an inch or more in diameter. Those portions of the skin between the diseased spots on the hand and those on the forearm, and extending up to the middle third of the humerus, were in an erysipelatous condition. The labor was easy, natural, and only of three hours' duration, with no malpresentation, no malposition. My partner, Dr. Barron, a man of skill and long experience,

having requested me to see the child with him, we agreed fully in our diagnosis, and put the child under treatment for gangrene. In a few days, the dark, livid surfaces cleaned off, separating from the adjacent healthy integument, and leaving healthy granulations beneath. After a few weeks, the parts recovered their normal condition, with the exception of a slight atrophy of the hand and arm, some stiffening about the wrist, and flexion of the third and fourth fingers.

On inquiring into the history of the mother, it was found that she used frequently to dress the wounds of soldiers at home on furlough, many of whom suffered from gangrene, and that during her pregnancy, a few months before confinement, she had to dress a very severe wound which had taken on this character.

I submit, whether or not the impressions made upon the mother's mind, through the medium of the nervous system, from association with such character of wounds, could have produced through the same medium, by reflex action, so great a change in the nutritive functions of the parts as to bring about this change.

DR. B. W. TAYLOR, of Columbia, presented a paper on

THE DIAGNOSIS AND TREATMENT OF SERO-PURULENT COLLECTIONS AFTER CHILD-BIRTH.

of which the following is an abstract:

Notwithstanding the advancement that has been made in the treatment of the puerperal state, it is often followed by grave symptoms and fatal results, arising from pelvic inflammations, peritonitis, and cellulitis. There are some points in connection with these affections to which we can best direct attention by a report of the two following cases.

CASE I.—Mrs. P., aged 32, fifth confinement. Previous to this pregnancy had enjoyed the best of health, but during the last three months had suffered occasional attacks of malarial fever, and had complained of some pain in the uterus. She had always been attended by a midwife. On this occasion the midwife, finding little progress made after four hours' suffering, requested me to be called in.

Upon examination I found a rigid os, dilated to about the size of a half dollar, and a posterior position of the occiput. After some hours the rigidity of the os was partly overcome, but the head had made little progress. I delivered with the forceps, proceeding leisurely, to allow the parts time to dilate. The child was born dead. There was a right, lateral laceration of the cervix up to the vaginal junction, which bled freely, but the flow was stopped by the use of hot-water injections; but her pulse remained frequent, the after-pains troublesome, and her general appearance indicated trouble ahead. On the fourth day she had a severe chill, followed by fever and pain in the pelvis. Later she had two more chills followed by sweats, nausea, vomiting, and tympanitic distention of the abdomen from general peritonitis. The lochia having become offensive, the uterus was syringed out three times a day, in addition to the use of vaginal injections. A tumor could now be felt through the abdominal walls, about the size of the uterus in the fourth month of pregnancy, situated in the right broad ligament, and its induration extending down to the cervix. On the 19th day a very offensive, light-yellow, sero-purulent discharge took place, entirely different from the lochia, and evidently not uterine. On examination with a Sims' speculum the discharge could be seen issuing from the laceration of the cervix, at its vaginal junction. A gum elastic catheter was passed through the opening into the tumor, and the sac was washed out and disinfected. The catheter was allowed to remain in, and the nurse was directed to wash out the sac every third hour. Every day the catheter was taken out and cleansed. Notwithstanding this local care and the usual general treatment of such cases the patient died on the twenty-sixth day, of pelvic cellulitis, terminating in general peritonitis, profuse suppuration, and septicæmia.

CASE II., kindly reported by Dr. A. S. Salley.—Mrs. C., aged thirty-three, of fine constitution and previous good health, was taken in labor with her fifth child at 1.30 A.M., December 6. I was requested to see her in consultation at 8 P.M. No progress had been made for several hours. Upon examination, the occiput was found in the hollow of the sacrum. She was now delivered with forceps, and, though the greatest care was used in the delivery, her symptoms, from the completion of labor, were unfavorable. She had several chills, fever, nausea, vomiting, and diarrhœa. On the 12th the uterine discharge was dark colored and offensive, and the uterus was washed out every four hours with a solution of permanganate of potash, On examination, I found an extensive laceration of the cervix on the right side, extending up to the vaginal junction, and cellulitis, which had given rise to a large tumor in the right broad ligament. On the 24th the abscess began to discharge a very offensive, dirty yellow, sero-purulent fluid. With Sims' speculum the discharge could be plainly seen issuing from the laceration of the cervix at its junction with the vagina. A catheter was introduced into the sac, which was washed out every six hours with the permanganate of potash solution, the catheter being retained in position. This treatment was continued for ten or fifteen days. Now and then a carbolized solution was used in place of the potash. She continued to improve until January 19, when she had a severe chill, with high fever, fetid breath, and a dirty yellow hue of skin.

Jan. 23.—She became unconscious; pupils dilated; urine dark, thick, and very offensive. Injected hypodermically pot. permang. gr. ¼ every four hours. A short time after this there was a decided improvement.

25th.—There was a free discharge of sero-purulent fluid, and on a speculum examination an opening was found within the cervix at the junction of the vagina, communicating with the sac of an abscess, smaller than the former; its contents were very offensive. A catheter was inserted, and disinfectants used as before. After this the patient rallied, and her improvement continued without interruption.

The special points we wish to direct attention to are these: That sero-purulent collections are more frequent than is supposed, and when discharged through the vagina their source is often overlooked; that when the contents are offensive, and keep up the fever, and the system is being poisoned, a drainage-tube should be left in the sac, and the latter washed out with disinfecting solutions *pro re nata*.

The question will arise whether these collections should be left to nature to make an outlet, or should the surgeon interfere? We believe that, if the symptoms indicate that the patient is in danger, an opening should be made early.

Papers were also read by Drs. Baruch, of New York; T. S. Means, of Spartanburg; A. A. Moore, of Camden; I. S. Hughson, of Sumter; Cornelius Kollock, of Cheraw; F. L. Parker, of Charleston; James Evans, of Florence; F. P. Porcher, of Charleston; Thos. I. McKie, of Edgefield; C. R. Fake, of Orangeburg; H. M. Holmes, of Spartanburg, and J. Ford Prioleau, of Charleston.

RESOLUTIONS

were adopted condemning the action of the New York State Medical Society in altering the Code of Ethics. (See THE MEDICAL NEWS, May 6, p. 507.)

Resolutions were also adopted endorsing the object of a bill now before Congress to create an international

commission for establishing definite and uniform standards of examination for color-blindness.

THE DISCOVERER OF ANÆSTHESIA.

A committee of three was directed to be appointed to investigate the claims of the original discoverers of the anæsthetic properties of ether, and the successful application of the same in surgical operations, to report at the next meeting.

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President, F. F. Gary, M.D., of Abbeville; *Vice-Presidents*, Drs. P. A. Wilhite, of Anderson; W. A. Harrison, of Spartanburg; and A. A. Moore, of Kershaw; *Corresponding Secretary*, Dr. H. D. Fraser, of Charleston; *Recording Secretary*, Dr. John Forrest, of Charleston; *Treas.*, Dr. H. W. De Saussure, Jr., of Charleston.

The Association adjourned to meet next year on the 26th of April, at Yorkville.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting May 4, 1882.

FORDYCE BARKER, M.D., PRESIDENT, IN THE CHAIR.

THE minutes of the previous meeting, and the Librarian's report, having been read and approved, the Statistical Secretary, Dr. White, reported the death, on that day, of a Resident Fellow, Dr. James R. Wood, in the sixty-sixth year of his age, of double pneumonia.

DR. John G. Adams, Corresponding Secretary, read a memoir of Dr. James O. Pond, a deceased Fellow.

The scientific work of the evening consisted in an

ADJOURNED DISCUSSION ON BRIGHT'S DISEASE, SUGGESTED BY THE PAPER OF DR. McBRIDE.

DR. W. H. DRAPER opened the discussion by saying that it was a striking tribute to the genius of Bright, as well as a remarkable illustration of the slow progress which the art of diagnosis has made in the department of renal pathology, that the name, Bright's disease, is still the name by which we generally recognize the various forms of chronic nephritis. Bright offered no explanation of the morbid conditions which he described, and thus far the researches of pathologists, anatomists, and clinical investigators have failed to give common consent for any fixed pathological process, or invariable cause of symptoms, by which a a scientific nomenclature, or a characteristic clinical picture of the different forms of the disease can be established.

In opening the discussion of Dr. McBride's paper, Dr. Draper did not propose to consider the views of pathological anatomists as to the nature of the morbid processes involved in the production of the different forms of Bright's kidney. It was taken for granted that that which Dr. McBride meant when he gave the title of his paper, *The Early Diagnosis of Chronic Bright's Disease*, was the early diagnosis, especially of that insidious form of the malady, which, so far as we know, never begins by any symptoms which prominently call attention to the kidneys. In other words, the granular form of kidney, with its correlated phenomena of hypertrophied heart and atheromatous arteries. It was well known that the victim of granular kidney is liable to attacks of renal congestion of greater or less degree, giving rise to symptoms and signs which are pathognomonic. Several points in the etiology of this disease were considered. The first and one of the most important was heredity. The second point was the existence of the gouty habit, whether inherited or acquired. In support of this point several authorities were quoted. In studying the relations of gout to renal disease, their significance depended entirely on the recognition of the correlated phenomena in the history of gouty disease. We must take into consideration all the functional disturbances which result from lithæmia, which include the derangements of digestion, the urinary disturbances, and especially the irritations of the nervous system. We must consider the trophic derangements as observed in catarrhal affections of the mucous membranes, in the eczematous diseases of the skin, in the acute and subacute inflammations of the serous and synovial membranes, and finally the vascular nervous lesions. This may seem to be making of gout a universal disease, and so we believe it is, for the reason that it recognizes a universal cause in the inevitable errors of nutrition. A third etiological factor in granular kidney was senility. It was a disease of advanced life, being extremely rare under twenty, and the largest proportion of cases occurring between the ages of fifty and sixty. Senility was not alone to be recognized by years, but by the signs of degeneration peculiar to age, and these signs might be present earlier than was normal.

The object of reviewing these etiological factors in granular disease of the kidney was to show their bearing upon the theory that the disease is a general and not a local one.

The cardiac and vascular changes which are found in connection with this disease did not escape the observations of Bright, and the theories which he advanced in regard to the same are the theories upon which, at the present day, professional opinion is divided. Bright, in a report of a hundred cases of renal disease, says: "the obvious structural changes in the heart have consisted chiefly of hypertrophy with or without valvular disease; and which is most striking, out of fifty-two cases of hypertrophy, no valvular disease whatever could be detected in thirty-four; but in eleven of these thirty-four, more or less disease existed in the coats of the aorta, still, however, leaving twenty-two without any probable organic cause for the marked hypertrophy generally affecting the left ventricle. This naturally leads us to look for some less local cause for the unusual efforts to which the heart has been impelled; and the two most ready solutions appear to be, either that the altered quality of the blood affords irregular and morbid stimulus to the organ immediately, or that it so affects the minute and capillary circulation as to render greater action necessary to force the blood through the distant subdivisions of the vascular system. It is observable that the hypertrophy of the heart seems in some degree to have kept pace with the advance of the disease in the kidneys."

The most important part of Dr. McBride's paper, said Dr. Draper, was the contribution of the cases by which he sought to establish the possibilities of the early diagnosis of the form of the disease we have been considering. In thinking over the question of early diagnosis, much study should be given to the causes which are concerned in the production of the disease. Occasional albuminuria might occur as an early symptom. Dr. McBride had called particular attention to pulse tension as a sign of cirrhotic kidney, but it was also, probably, a symptom of the functional or formative stage of the disease. Dr. Draper agreed with Dr. McBride as to the great importance of high specific gravity of the urine, as an early sign of renal lesion.

Dr. Draper believed, however, that the appreciation of a functional or formative stage of granular kidney is, after all, but the early appreciation of the etiological factors which had been considered.

The question of heredity had as much importance in this disease as in phthisis. A still more important point was the early recognition of the gouty habit. It was doubtful whether we would ever arrive at anything more than a conjectural diagnosis of a formative stage of cirrhotic kidney.

THE PRESIDENT said that, about twenty-two years ago, this subject was before the Academy, and was dis-

cussed for several successive meetings, dwelling at length on albuminuria. The paper of Dr. McBride, and the points brought out in the opening of its discussion by Dr. Draper, showed that great advancement had been made, especially in regard to etiology and diagnosis. The therapeutics had not received quite as much attention as he should have hoped. In the discussion he would take the liberty to ask for an expression of opinion as to the therapeutic value of digitalis, and what discrimination in cases should be made in its administration. In the acute albuminuria of pregnancy and albuminuria associated with acute diseases he had found digitalis to be one of the most valuable remedies we have in restoring the function of the kidneys and promoting the elimination of urea. But in chronic cases it had seemed to him to be contraindicated.

DR. A. H. SMITH, in replying to the President's question, recalled the statement of Fothergill, that digitalis acts as a diuretic when it increases the arterial tension. If the action of the heart was such that, by increasing the length of the systole, we could get a more efficient action of the heart, a diuretic effect could be obtained by the administration of digitalis. As to other points in the treatment of albuminuria, he had been much gratified with the milk diet and hygenic treatment of this class of cases. He thought these patients should be in the open air as much as possible, as he believed it had been determined that excess of uric acid depended upon deficient oxidation. Whether the artificial administration of oxygen would be beneficial, he could not say. He wished to ask whether gout, as seen in England among the horse-racing gentry, is as likely to be accompanied with kidney disease as it was when occurring in persons of a sedentary habit.

DR. S. O. VANDERPOEL saw many forms of temporary albuminuria in which the lithæmic condition could not be recognized, or any difficulty of the vaso-motor system. He recognized, however, low blood pressure as being almost always the cause of albumen in the urine. In the first urine passed in cholera a large amount of albumen would be found. It would also be found in pneumonia, certain diseases of the heart, emphysema, and some forms of catarrhal pneumonia. He fully agreed with Dr. Draper. He thought that granular kidney should no longer be known by the name of Bright's disease. It was a diathetic disease. He had always supposed the arterial changes were first. Of course, in the early stages of this disease, there were scarcely any signs by which it could be recognized. It was a slow, insidious disease, running five, ten, or fifteen years. Patients rarely applied for treatment until the occurrence of the secondary accidents of the disease, as polyuria, hemorrhage from the nose, diarrhœa, etc. Digitalis was rarely applicable until the later stages, when the arterial tension had lessened to a great extent.

DR. KINNICUTT remarked that in his paper he had only endeavored to point out *one* of the probable causes of transient albuminuria. He believed it to be a matter of great importance to determine, if possible, whether any of the commonly accepted cardinal symptoms of granular kidney, viz., polyuria, albuminuria, casts, increased arterial tension, cardiac hypertrophy and changes in the fundus oculi, were so commonly present in the early stages of the affection, as to render its diagnosis at such times possible. Granting that no one of these symptoms was constantly present, nevertheless he believed that certain ones were of sufficiently common occurrence to demand especial attention. He referred to increased arterial tension, polyuria, and the presence of hyaline casts in the urine. He would confine his remarks to the last-mentioned symptom. By hyaline casts, he referred to casts homogeneous, without fibrillation, and unaffected by acetic acid. The tendency of modern English and American pathologists, it seemed to him, was to underestimate this symptom. Dr. George Johnson had taught that little value need be attached to their presence in the urine. Dr. Sandby, on the contrary, held quite an opposite opinion. Quite recently Aufrecht had apparently demonstrated, by a series of interesting experiments on animals, that hyaline casts were the result of an irritation of the renal epithelium, in consequence of which it secreted a clear fluid in drops, which subsequently ran together into cylinders, taking the form of the tubuli. These observations had been confirmed by Cornil. As Dr. Sandby had suggested, the production of casts of this type probably represented a process of minimum intensity, and that they were significant in proportion to their number and persistence.

Dr. Kinnicutt thought that for these reasons, among others, hyaline casts occurring alone, and particularly when associated with increased arterial tension, possibly constituted an important early symptom of granular kidney. The not uncommon occurrence of these casts in the water of patients suffering from persistent aggravated lithiasis is certainly suggestive. The existence of polyuria was believed to be a very early and valuable symptom, and the speaker thought that not enough care was usually taken in regard to determining this point. It required a good deal of questioning and, more than all, the measuring of the water for several days.

DR. F. A. BURRALL remarked that, in the study of two hundred examinations of specimens of urine, he found albuminuria present in eighteen cases, one in which uric acid was noticed, and two in which the presence of the oxalate of lime was mentioned. In regard to the specific gravity, he found it to be 1030 in three cases, 1008 in two, and 1010 in three. His impression was that albuminuria is by no means a frequent concomitant of lithiasis. He had records of cases of albuminuria, or chronic nephritis, illustrating the chronicity of this disease, having extended over a number of years, and at the same time the result of treatment, or spontaneous recovery. The records of one case ran from 1861 to 1879. The patient when first seen was a girl of ten years of age. The first symptom observed was occasional attacks of faintness. An examination of the urine disclosed the presence in it of albumen, and subsequently, casts. Whether the patient was cured by treatment, or recovered spontaneously, was impossible to say. It was a general impression that Bright's disease does not tend to spontaneous recovery. In this case, there were occasional exacerbations of the disease. In 1871 an examination of the urine showed no albumen. It was present in 1874. There were traces of it in 1876. In 1879 it had entirely disappeared, and the urine contained neither albumen nor casts. The treatment consisted mainly in attention to the rules of hygiene, warmth to the skin, and the use of the hot-air bath, together with the preparations of iron. There was one symptom which Dr. Burrall thought should always arrest our attention, and this was functional nervous disturbances. These, he thought, would be found many times to coincide with the existence of albumen. These, he thought, depended upon some functional disturbance of the kidney, and temporary suppression of elimination of the poisonous elements.

DR. MCBRIDE thought the point of greatest importance in the discussion was whether we could establish a stage ef early occurrence of Bright's disease characterized by a sufficient number of symptoms to permit of its appreciation. At present our diagnosis of chronic Bright's disease is based mainly upon the low specific gravity of the urine, its quantity, and the presence of certain tube-casts and cells in the urine. If it can be said that there are present before these, certain symp-

toms which are observed constantly, and which may appear years before the symptoms indicating the close of the disease, great gain will have been made. Dr. McBride thought we are now in possession of these symptoms, but in estimating their value we have to take into consideration the personal equation. He knew of no more difficult task than the determining of the existence of high blood tension. In examinations of urine great care was necessary. We were very likely to overlook the presence of albumen or hypertrophy of the heart.

He was glad to have an opportunity of calling attention to the therapeutics. He believed that, in this country, the intelligent regulation of the diet of patients affected with suboxidation was due mainly to Dr. Draper, and would like to have the Doctor give a synopsis of the diet he advises in these cases.

DR. DRAPER remarked that he claimed nothing original in his views on diet; that the views which he now held were derived from the reading of one of the most remarkable books that had been written up to the time it was published—a book that was far ahead of the pathology and therapeutics of that time; he alluded to the work of Dr. Bence Jones. This book was published, he believed, in 1860, and was devoted to the discussion of what Dr. Jones described as *diseases of suboxidation*. It was an application of Liebig's views on gout and allied disorders, and consisted of a somewhat strictly chemical view of disease. The book was severely criticised at the time of its publication, but the views set forth in it were gaining ground.

In regard to the inquiry of Dr. Smith, as to whether gouty kidney is seen more commonly among gouty persons of sedentary habits, than among those who lead active out-door lives, he was unable to answer. His belief was that there are a great many gouty lesions, and that the vulnerability of different organs determines, in a very large degree, the points upon which the gouty tendency makes its inroads. In some individuals the joints are the weak and vulnerable points, in others the skin seems to be the weak point, and in still others, the mucous membranes seem especially to suffer. In others, again, he thought the arterial system was the chief point of attack. What it is that determines these different points of attack he thought was impossible to say, unless there was within each one of us, some point which yields more easily than others to attacks of disease.

As to the use of digitalis in the treatment of chronic granular kidneys, he would say, as Dr. Smith had said, that its use during the early stages, and through the chief continuance of the disease, was inapplicable, inasmuch as the condition of the heart is just the condition we aim to produce by digitalis. When valvular disease of the heart complicates this disease of the kidneys, he thought the rules guiding its use were pretty well settled. If the lesion be of the mitral valves, digitalis is unquestionably a remedy of great value, whether this condition be accompanied by granular kidney or not. If, as Dr. Draper thought was more likely, the complication is a lesion of the aortic valves allowing regurgitation, the same rules apply as in aortic insufficiency under any circumstances, digitalis would not be indicated, inasmuch as it increases the diastoles of the heart. In his own experience he had found morphia a much more valuable remedy in the later stages of granular kidney than digitalis, whether there be aortic insufficiency or not. We have all seen the great suffering of these patients from dyspnœa, towards the close of the disease, which is independent of any pulmonary lesions, and which is unexplained, notwithstanding many hypotheses have been offered. For this form of dyspnœa, whether accompanied or not by valvular disease, Dr. Draper believed there was no remedy which excelled morphia. Digitalis did not relieve this dyspnœa, and it might occur with considerable heart tension.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Stated Meeting, May 3, 1882.

W. S. W. RUSCHENBERGER, M.D., PRESIDENT, IN THE CHAIR.

DR. JOHN B. ROBERTS exhibited a remarkable case of *Sacculated or of Cirsoid Aneurism of the Second Interosseous Branch of the Deep Palmar Arch, treated by Excision.*

The specimen is interesting because of the extreme rarity of the condition.

From his earliest childhood the case had been under Dr. C. H. Thomas's observation, and had had a small elongated tumor upon the *dorsal* surface of the first phalanx of the left ring-finger, while in the *palm*, at the junction of the bases of the middle and ring-fingers was a larger swelling. These were considered masses of dilated veins, as they had a spongy feel, and at times showed a bluish color. There was no very definite connecting band of swelling between the dorsal and palmar enlargements. No special pain was experienced unless the parts were struck, and no marked growth occurred. Hence nothing was done. As the boy grew, the hand and tumor increased, but held the same relative proportions. When the boy began work in a machine shop, the skin became thickened and soiled, and the bluish tint was no longer discernible.

About two months or less ago, the growths seemed to enlarge and to be accompanied by considerable pain, and Dr. Thomas advised the use of a compress in the palm and a bandage around the finger. This the boy wore at nights, and when off work. Recently there was noticed pulsation in the palmar tumor and a lobulated feel; and Dr. Thomas feared that an arterial aneurism existed.

When Dr. Roberts examined the boy last evening, he found on the back of the third finger a hard fibrous-like tumor, as large as a watermelon seed, with the long diameter corresponding to the length of the phalanx. In the palm was an illy defined swelling covered with thick skin, very sensitive to pressure, and occupying about the area of a silver half-dollar. No swelling was evident connecting the two tumors. On the ulnar side of the palmar mass moderately distinct pulsation could be felt, which quickly stopped when the radial artery was compressed at the wrist, but merely decreased in force when the ulnar was pressed upon with the finger. No pulsation was felt in the dorsal tumor. The boy had severe pain even when no pressure was made upon the growth in the palm.

Dr. Roberts was of the opinion that the growth was an arterial angeioma connected with the second interosseous branch of the deep palmar arch, having anastomoses with the digital branches of the ulnar artery. Dr. Thomas considered it possibly this, but probably a sacculated aneurism. His diagnosis has proved to be the more correct. It was determined to employ the Esmarch elastic bandage, and to make a free incision over the tumor and dissect it out, whether it be angeioma or aneurism. The boy was etherized and the elastic bandage applied.

Dr. Roberts made an incision from a point a little in front of the superficial palmar arch to the commissure of the fingers, and came upon a mass of fat and small vessels, in the centre of which was a bluish nodule, resembling larger vessels containing blood not driven out by the elastic bandage. Keeping close to the skin, and going down to the sheaths of the flexor tendons, he dissected the mass free. Lying alongside of the palmar interosseous muscle going to the ring-

finger (2d interosseous) he saw a comparatively large vessel which seemed to be the main feeder of the mass. He then extended his incision, making a straight cut along the side of the ring-finger, dissected up the skin, and enucleated the hard nodule lying on the back of the first phalanx. This seemed connected with the other mass by some fibres or small vessels, and both were removed as one piece. The wound was then plugged with dry muslin to stop the general oozing that occurred after removal of the bandage, and a tight bandage applied. No ligatures were required, because the incisions were made at a distance from the tumor.

Dissection of the palmar mass showed a small body, about three-quarters of an inch in diameter, containing clotted blood, and surrounded by adipose tissue and nerves. Small collapsed vessels in large numbers may perhaps be found in this adipose tissue by microscopic examination. Only a few larger ones were recognizable by ocular inspection because of the absence of blood from the interior. The tumor consists of three lobules of rather unequal size, arranged somewhat as a trefoil. The largest one of them, which has been punctured, allowed the escape of soft clot; this sac is about one-half an inch in diameter. The three sacs seem to be separate, because the head of a pin introduced into one does not pass into the others. The two smaller sacs or lobules are hard, as if the clot was old. One has been laid open, and shows a white centre, or nucleus, of cartilaginous consistence surrounded by a layer of red clot. On the surface of this three-lobed tumor runs a nerve, which probably was the seat of pain from pressure, and parallel to it a small artery. Both of these become lost in the mass, at the upper end of the tumor, which was thought to contain the main supply of the aneurism, and around which a string was tied and left for identification.

The tumor from the back of the finger is hard, and on section shows an irregularly colored red surface. The tumors, therefore, appear to be small sacculated aneurisms, evidently allied to, or identical with, the variety called cirsoid aneurism. The one on the back of the finger and the two smaller lobules in the palm, are undergoing cure by coagulation, induced in the dorsal one undoubtedly by the pressure from the bandage used at intervals during the last six weeks or two months.

The early period of life (about three years) at which the trouble was noticed primarily renders it probable that the aneurisms were not originally traumatic. It is possible that the vessels of an arterial angeioma may have become so dilated as to resemble these multiple aneurisms. The similarity to cirsoid aneurism is certainly very great, though there are some points which differ somewhat from the usual clinical history of these growths.

DR. W. W. KEEN called attention to the danger of using coagulating agents in such cases, and spoke of a case of traumatic origin he had seen in consultation, in which a few drops of Monsell's solution had been injected into the aneurismal sac, and gangrene had followed, necessitating amputation of the hand. He thought compression of the radial and ulnar arteries would probably have accomplished a cure, and the risks of an operation would have been avoided.

(To be continued.)

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, May 4, 1882.

E. L. DUER, M.D., PRESIDENT, IN THE CHAIR.

Icterus Neonatorum.—DR. BOARDMAN REED, of Atlantic City, N. J., remarked that the questions of most interest with regard to icterus neonatorum are its etiology and pathology, and its relations to umbilical hæmorrhage and purpura. As to the first of these points, we can arrive at satisfactory conclusions only after an extended series of autopsies such as it is rarely or never the privilege of the physician in private practice to see. The wards of lying-in hospitals ought to afford the needed data to determine, finally, whether jaundice in the new-born originates in the liver or in the blood. A sufficient number of thorough post-mortem examinations do not seem to have yet been made to set this question at rest, hence we find a variety of theories maintained.

The theory advanced in many of the older books is that the retained meconium forms an obstruction to the escape of bile. This does not seem to have been confirmed by post-mortem examinations, and is improbable from the fact that icterus usually does not develop in infants until several days after birth, and after there have been numerous fecal evacuations.

Some of the German authorities consider that icterus neonatorum is probably due to lowering of the blood pressure in the hepatic capillaries, in consequence of the cessation of the blood stream passing directly from the umbilical veins into the portal vein. This at first appears plausible, since experiments upon animals, conducted by Haidenhain and Lichtheim, prove that lowering the blood pressure in the liver, as by starvation, or establishing a biliary fistule, may cause all the phenomena of jaundice. But as this change in the circulation must take place in every infant immediately after birth, we should expect jaundice to be universal in the new-born, and to come on always within a day or two after birth, whereas it affects a very small proportion of the whole number of children born, and is generally developed between the third and tenth days.

It seems more probable to me that jaundice in the new-born (excluding the transient yellowish discoloration due to the natural fading of the rosy color first seen in healthy infants) may arise from at least two wholly different causes, and is therefore divisible into two classes, one obstructive or hepatogenous, and the other of hæmic origin, or hæmatogenous. The first, we have reason to believe, originates most frequently, as in adults, from a catarrh of the duodenum or bile ducts, which we might expect *a priori* to result during the first week of life from the ablutions to which many infants are subjected under circumstances that render the taking of cold almost unavoidable before a tolerance has become established.

That exposure to cold is one frequent factor in producing the disease is well known. It is recorded by West that in the Dublin Lying-in Hospital, where the hygienic conditions are excellent, infantile jaundice is very rare; while in the Foundling Hospital at Paris few infants escape it, nearly all the abandoned little waifs being exposed to cold before admission.

It is doubtless true that jaundice dependent upon persistent obstruction, occlusion, or congenital absence of the bile ducts, instances of which have been observed in infants, may go on to the production of profound blood changes and be complicated with hæmorrhage as a consequence from the umbilicus or mucous surfaces; but I am disposed to maintain that many of the grave cases associated with such hæmorrhages are of hæmic origin. The reasons for this view are:

(1.) The constantly observed fact that the most intense forms of obstructive infantile jaundice are often accompanied by light stools and high colored urine, and yet unaccompanied by any tendency to hæmorrhage. Several of my cases exemplify this fact, and, notably, the one hereinafter reported, of a child born with measles and shortly afterward developing jaundice. Every practitioner must see many cases of severe

yet uncomplicated jaundice. On the other hand, persistent and fatal hæmorrhage now and then occurs in cases where the jaundice is only slight. Many such are on record; nor can it be assumed that the connection is only accidental, as the statistics to be cited further on abundantly establish a causal relation between jaundice and hæmorrhage.

(2.) The fact that these hæmorrhagic cases associated with slight jaundice do not usually present any marked evidence of obstruction to the flow of bile, such as constipation, white stools, etc.

(3.) The fact that they occur frequently under conditions such as immaturity and feebleness at time of birth, which have no obvious connection with hepatic obstruction, but are most likely to be dependent upon an inheritance of poor blood from the maternal system, or of digestive and assimilative powers so weak that the elaboration of healthy blood by the infant organism is impossible.

These reasons, I submit, render still tenable the theory that infantile jaundice may have other than a hepatic origin.

The relations of icterus neonatorum with the hæmorrhagic condition manifested most often by bleeding from the umbilicus, is a subject of much interest and practical importance, concerning which the profession is in need of more exact information. That there is often a dependence one upon the other is certain. Among two hundred cases of spontaneous umbilical hæmorrhage which have been reported, including two of my own, jaundice was observed in seventy. It probably existed in a slight degree in a much larger proportion not being considered of sufficient importance to report, but even the above-recorded ratio of more than one in three is sufficient to prove a causal relation, since in any unselected two hundred births we should not expect to have more than ten or fifteen cases of jaundice, instead of the enormous number of seventy.

Spontaneous umbilical hæmorrhage is so rare that many physicians of extensive experience have never seen it. West, in the first edition, gives a better description of it than most recent writers on diseases of children. He emphasized, particularly, the fact that it may depend upon a grave form of jaundice, but states that he had never met with a case of it.

This complication being so rare, I shall not apologize for briefly summarizing here a report of an interesting case of it seen two and a half years ago in Atlantic City.

CASE I.—A female child born two weeks, at least, before term; weight about six pounds. The mother had suffered at times, for years, from anæmia, palpitation of the heart, and various hysterical symptoms. During the pregnancy she had nausea almost constantly due to disease of the cervix. Vomiting was so severe and frequent towards the close of the period, that her health was greatly impaired by it. I was on the point of applying nitrate of silver to the cervix, when, after a number of uterine hæmorrhages, extending over a week, labor came on and the child was speedily born. The father was even more delicate than the mother, having chronic dyspepsia, periodical sick headache, and nervous exhaustion.

After the delivery the cord was secured with a double ligature, and there was nothing abnormal until the fourth day, when the compress over the umbilicus was found saturated with blood, which oozed from all parts of the softening funis. Numerous powerful styptics were applied, with only temporary good results; the bleeding, though checked for a time, always recurring after the lapse of a few hours. Dr. W. H. Bennett was was called in consultation, and the day after the hæmorrhage began, hare-lip pins were inserted through the tissues beneath the umbilicus and the mass ligated. This greatly diminished the bleeding, and the following day the ligatures were tightened, with the effect of finally stopping it. Ergot and tincture of the chloride of iron were administered in very small doses, with a view to modifying the hæmorrhagic diathesis which evidently existed. Before the hæmorrhage was controlled, spots of purpura appeared on the forehead and other parts; jaundice developed shortly after the bleeding began, and became marked enough to be noteworthy, but was at no time intense; the stools continued unchanged in appearance, with a tendency to diarrhœa, rather than to constipation. The mother having no milk, the child was fed artificially from birth. Shortly after the hæmorrhage ceased, a volunteer wet-nurse suckled the child for several days, with manifest advantage. When artificial feeding was resumed, diarrhœa set in and became troublesome; appropriate treatment, and a change from cow's to condensed milk, checked the bowels; but the child failed steadily, nutrition evidently being irreparably damaged, and some icterus persisted until the seventeenth day, when it died. No autopsy was permitted.

As an interesting supplement to this report, I may add that a few months ago another child was born to the same parents, and has had the following history: It was a male, and somewhat larger at birth than its predecessor. On the second day there was some oozing from the funis, in spite of two ligatures most carefully applied; but this was so readily controlled that it would scarcely have received a second thought, except for the serious hæmorrhage in the previous child. As showing the feeble and neurotic constitution bequeathed to these children, it may be mentioned that this infant had a convulsion on the second day after birth, and has had similar seizures at frequent intervals since. It has shown no jaundice at any time.

As a striking example of hepatogenous jaundice in the new born, the following report is introduced.

CASE II.—The mother while pregnant contracted measles in a severe form; the rash, after coming out well, retroceded, pneumonia developed, and she then aborted some two or three weeks before term. The child, which was of fair size, weighing upwards of seven pounds, was covered with a faint rash at the time of birth, and within a day or two presented the usual symptoms of the exanthem, including the catarrh, though the fever was slight. By the fourth day, its skin began to turn yellow, and there was rapidly developed a very intense form of jaundice, the color, at one time, becoming almost olive green. There was constipation, with one hard, white, putty-like stool daily, urine high-colored, staining the napkins. The liver seemed abnormally small; the region of dulness on percussion measuring about one and a half inches in the mammary and one inch in the axillary lines. The child was fed first with diluted cow's milk, and later with condensed milk. I saw the case on the ninth day from birth, juandice was then very marked, the hue being of a greenish-yellow; but there had been no hæmorrhage either from the umbilicus or any other part. The child manifesting considerable appetite, and apparently fair digestion, I ventured the opinion that it might possibly survive, though an unfavorable prognosis had previously been given. It recovered gradually from the jaundice which lasted in all some twelve days, but has since suffered severely from indigestion, and is not thriving well.

Careful microscopical examinations of the blood taken from a large number of infants affected with icterus in its various forms would shed much light upon the subject; but I cannot learn that any systematic observations of the kind have been made. I regret that such an examination was not made in any of my cases, an omission to be expected of a busy physician

in private practice, but one which our friends, the internes in the lying-in wards of the hospitals, ought to make, amply supplied as they usually are, with all the necessary appliances, and with authority to institute any necessary scientific investigations.

Dr. Henry Beates, Jr., Physician to the Sheltering Arms Hospital, Philadelphia, has kindly furnished me with the following notes of cases recently seen by him:

"Having in my ward a large, plump, finely-developed infant, presenting the characteristic manifestations of the so-called icterus neonatorum, I submitted a drop of its blood to microscopical examination.

"The tendency to the formation of rouleaux was characteristically healthy. The corpuscles have the normal relationship of white to red. The only noticeable feature constituting what might be considered an etiological factor of this affection is a greater number of disintegrated red corpuscles and free protoplasmic nuclei. These, however, were very slightly in excess of that commonly seen under ordinary circumstances, and not sufficient, in my mind, to satisfactorily account for the intensity of the discoloration. Other symptoms of jaundice, like involvement of conjunctivæ, pigmentary discolorations by the urine, light stools, etc., were and are positively negative. I desire to especially direct attention to the fact that this infant is well nourished and plump.

"Another case, in fact two, presenting the same phenomena and under the same conditions of good nourishment, I might say plethora, have occurred recently in private practice.

"Another child in my ward, when a little less than eight days old, also presented the phenomena of icterus; but mark the contrast. The child was small, thin and poorly nourished, its expression was one of suffering, its bottle was not eagerly sought, and vomiting frequently occurred. The bowels were constipated and presented the peculiar clay-colored stool, and the urine stained every thing with the characteristic yellow, the conjunctivæ were also involved. After a period of two or three weeks, the icterus had faded, and the child is now thriving well. This is an instance of true jaundice (catarrhal), and presents features affording an opportunity of comparison with the discoloration of cutaneous hyperæmia seen almost as frequently as we see what might be termed plethoric babies."

Dr. Julius Kammerer, of Philadelphia, having spoken to me of some remarkable cases of icterus, I asked him to summarize his experience in a note which is here appended.

"There have been cases under my observation where the jaundice of children coincided with, and was dependent on, an ulceration and non-cicatrized state of the navel. This cause of jaundice was so clearly demonstrated that in the autopsy of fatal cases there were found phlebitis of the umbilical vessels extending sometimes to the portal vein, and even small abscesses in the parenchyma of the liver. In every case of icterus of the new-born, I have made it a rule to examine the navel looking for signs of inflammation or ulceration, as the prognosis in case of their existence would be less favorable than in cases of catarrh or mechanical obstruction of the biliary ducts. I have seen some of these cases end fatally by the spread of imflammation to the umbilical veins, or by a putrid condition of the blood subsequent to the absorption of purulent and putrid matter."

These observations of Dr. Kammerer were partially made at the Paris Foundling Hospital, during his studies in that city, and seem to me highly important. His note was not received until after the completion of this paper, and on the eve of this meeting, else the views it embodies would have received full consideration in that portion of this paper devoted to the discussion of the etiology of infantile jaundice. It is confirmatory of my opinion, that such discoloration may be hæmatogenous and often associated with disease of the umbilicus.

I have notes of many other cases of simple jaundice in young infants, but they would exemplify nothing more than is shown by the foregoing reports. As already intimated, the subject needs further investigation, but clinical study simply will not afford the light required. The revelations of the dead-house and the microscope, carefully and scientifically observed, can alone determine positively the points in dispute.

NEWS ITEMS.

NEW YORK.

(*From our Special Correspondent.*)

A New Medical School Projected.—Communication has been established between the Hon. Andrew D. White, President of Cornell University, and the recently resigned gentlemen of the Post-Graduate Faculty of the University Medical College, relative to the establishment of an endowed medical department of Cornell University, to be located in the city of New York. Though no official action has yet been taken by the trustees of Cornell University, yet the following, copied from the editorial columns of *The Cornell Era*, of May 5, will serve to indicate how the new scheme is received at Ithaca:

"Eight professors, who have recently resigned from the medical department of the University of New York because they were unable to carry out a system of post-graduate instruction, wish to establish a medical college which shall be connected with Cornell and under the control of her trustees. . . . The proposals submitted are substantially that the new college shall differ in many respects from those already established; that it shall have entrance examinations, and its classes shall be graded; that there shall be a post-graduate course, in which most thorough use will be made of the clinical facilities of the city; that the professors in the college shall have a voice in its government, and, most important of all, perhaps, that the institution shall be endowed, and the salaries of professors shall not depend upon the size of their classes.

"Professor Wilder, several years ago, published his views in regard to the establishing of additional medical colleges. 'It is to be hoped,' he said, 'that no proposition to establish a new medical school will be entertained, unless it include the assurance of an endowment such as may warrant an elevation of the standards for admission and graduation far above the present level. . . . . The elevation of the standard of medical education demands—*a*. High acquirements for admission. *b*. Lengthening of medical terms to nine months, not so much in order that more may be taught, as to allow time for digestion and assimilation of what is already presented in four, five, or six months. *c*. Systematic gradation of studies, and exclusion of first-year students from clinics and hospital wards. *d*. Increase of time for instruction in physiology and hygiene. *e*. Endowment of the chairs, making the salaries independent of the number of students or graduates. *f*. Separation of the teaching body from the licensing power, the latter being under central and national control.'

"These opinions were warmly endorsed by Prof. Agassiz. . . . Our University is at present doing thorough work in chemistry, anatomy, physiology, and hygiene, preparatory to the study of medicine, which is unlike that done at any other institution in the country, and which is infinitely more satisfactory than any slipshod medical course could be. President White is not in favor of founding a school of medicine simply for

the sake of founding one, but would heartily endorse the establishment of a medical college, whether connected with Cornell or not, which should be so thoroughly and unconditionally endowed that the college would not depend upon mere patronage for its support. By this means it would be possible to elevate the standard of medical education, to provide rigid entrance examinations, and still more rigid examinations for graduation, to lengthen the existing course of study, and provide thorough post-graduate instruction. . . . . The recent proposal of the eminent New York physicians seems more nearly to meet the wishes of our authorities than any before advanced, and should they be accepted, the fact will be in itself sufficient evidence that a medical college is to be established which shall more nearly realize the ideal of that growing class of thinking people who are becoming disgusted with the hasty and inadequate instruction of that numerous class of medical schools, which seem desirous of conferring diplomas upon students that shall represent the least medical knowledge which those students can be induced to accept. In an institution which is not heavily endowed, the temptation to call together as many students as possible is irresistible, and the instruction and standard of requirements must suffer in consequence.

"There are objections to the scattering of different schools of our university over a radius of several hundred miles, but the advantages of position in a metropolis are so evident that the disadvantages need hardly be taken into account; then, too, by the establishing of a department of our university in a large city, something of the provincialism charged against the present management would be gradually and naturally removed."

Thus it will be seen that the ambitions of the resigned New York professors are in a fair way to be realized.

ST. LOUIS.

(*From our Special Correspondent.*)

THE DEATH OF DR. JOHN T. HODGEN.—The telegraph has probably already informed the profession of the death of Dr. John T. Hodgen, of this city, and this announcement has caused sincere regret and sorrow in the profession wherever it has reached. It is difficult to realize the feeling with which the news of the great surgeon's sudden illness and his unexpected death were received in this city—indeed, in this State of Missouri. He had been in the very best of health, vigorous, cheerful, and full of life, working, as was his habit, from morning until night, in better health and spirits than he had been for years.

Thursday, April 27th, while in the court-room, he was taken ill; at 11.30 A. M., he suddenly felt an intense and exhausting pain, and at once drove home, hardly able to leave his buggy; he was so weakened by pain that he could not walk up the steps of his residence, but crawled up on hands and knees, calling for chloroform.

Dr. Spencer, the first physician called, dreaded peritoneal inflammation, and at once suggested an opiate, a hypodermic injection of morphia. But Dr. Hodgen, and it was most characteristic of the man, true to the last to his self-sacrificing nature, insisted on chloroform, as morphia always unfitted him for work for several hours, he said, whilst chloroform deadened the pain and allowed him to at once continue his rounds. He looked upon this as one of his usual attacks. He had already at various times had peculiar attacks of intense abdominal pain, which he supposed were due to biliary calculi.

This attack, as he remarked to Dr. Spencer, differed from any he had ever had, especially in the great tenderness of the abdomen. Other physicians, friends, and neighbors, soon came in, and the brief illness may be best described in the words of Dr. Baumgarten, who was his main attendant. At the meeting of the St. Louis Medical Society, he said:

"It was impossible to chloroform him. He breathed and moved so that it was unsatisfactory to administer it to him; it became impossible to relieve him with chloroform. Subsequently, during the course of the afternoon, repeated doses of morphia and bismuth relieved him somewhat, but as time went on we found it was more difficult to subdue the pain. Finally a large dose of strychnia put him to sleep. From that time on he remained quiet, and at midnight was sleeping peacefully. In the morning repeated injections of morphia did not entirely succeed in repressing the pain, and the case presented a more serious aspect. On the previous evening leeches were applied, and in the morning, after consultation, leeches were put on him again, but at this time a tenderness of the whole abdomen was apparent. The pulse increased; the hands were cold and clammy. At last an injection of morphia was combined with a small dose of atropia. His condition at this time required more care. I had to stop the leeches and administer stimulants. In the afternoon at 1 or 2 o'clock, his pulse ran up to 120 or 140, oscillating a good deal, the skin became very moist, several doses of atropia staved off the result for a time, but he sank rapidly. At 7 or 7.30 P. M. he passed away. During the day it was observed that peritonitis was setting in, the result of a perforation."

The post-mortem examination made upon the following day by Dr. E. H. Gregory, revealed a peculiar obstruction of the gall duct, resembling a stricture, by a valvular fold of the lining membrane, and a pinhole perforation of the gall bladder; no calculi; evidences of recent peritonitis and remnants of old and repeated attacks.

The numberless persons who crowded the dwelling to catch one last glimpse of that shrewd, earnest, but kindly face, testified to the respect in which the dead surgeon was held. The feeling among the people can only be compared to that which followed the news of the assassination of President Lincoln or Garfield. It was a universal and deep-felt sorrow among high and low, rich and poor, as was shown by the large attendance from far and near at the funeral, which took place upon a most beautiful and peaceful Sunday afternoon, when friends and relations, the medical societies of this city, medical men, students and colleagues, as well as patients from Missouri and Illinois, followed this tireless worker to his last resting-place.

Dr. Hodgen was born January 17, 1826, near Hodgenville, in the County of Larue, Kentucky. His father was Rev. S. P. Hodgen, a minister of the gospel. From his early boyhood, J. T. Hodgen showed signs of the brightest intelligence. From the very start in his pursuit after knowledge, he made rapid progress and distinguished himself at school. When a youth he was sent to Bethany College, Virginia, from which institution he graduated with honors. By the time he was twenty he was a student of medicine. He graduated from Dr. McDowell's college in St. Louis, and was a resident of this city for thirty-five years. For thirty-three years Dr. Hodgen was a professor of medicine, and no one loved more than he to impart knowledge to students.

He married Miss Mudd, of Pittsfield, Ill., sister of Hon. H. T. Mudd, and she survives him.

As a writer, Dr. Hodgen also attained distinction. He edited and prepared several departments of the American edition of Holmes' Surgery, recently issued, and was an occasional contributor to our periodical literature. During 1881 he was president of the American Medical Association. For a number of years and at

the time of his death he was Dean of the St. Louis Medical College, and Professor of Surgical Anatomy, Fractures, and Dislocations. He was noted as a leader of the profession to which he devoted his energies so assiduously, and in private life was loved and esteemed. He was a man of the loftiest sentiments, energetic, firm, intense, reticent, and, above all, honest.

His heart and soul were in the St. Louis Medical College, of which he was dean; and with his quiet firmness, circumspection, and self-reliance did he guide it, until he was looked to for everything, and, as a consequence, his loss will nowhere be felt as keenly as in this institution.

Meetings of all the medical societies of this city were held in honor of the dead surgeon, and many of those of this and neighboring States convened to offer sentiments of esteem and solemn eulogies to this universally honored man.

The expressions of sorrow on the part of profession and people are sincere, and especially sincere on the part of the poor. It is among the working poor that the great mass of surgical injuries occur, and here this good and true man did his noble work; never did he refuse a call for the poor, and although always in a hurry, never wasting a word in the sick-room, he was most attentive to the needy and poor, and gave them his very best skill.

Everywhere will he be missed and by every one.

LONDON.

(*From our Special Correspondent.*)

THE SURGERY OF THE URINARY ORGANS. — The recent advances in the surgical treatment of diseases of the urinary organs are the most interesting topics of discussion at the medical societies of London at the present time. Last week, at the Medical and Chirurgical Society, Sir Henry Thompson described a case of pedunculated fibroma of the bladder, which he had successfully treated by removal through a perineal incision. The patient was originally under treatment for calculus, and was submitted to lithotrity more than once, but the symptoms were not completely removed; and then, on careful exploration of the bladder, the tumor was grasped, though, as it was coated with phosphatic deposit, it was mistaken for a sacculated stone. Sir Henry Thompson opened up the membranous portion of the urethra from the middle line, and then, after detecting the true nature of the case, removed the growth by twisting it off with a pair of forceps; there was no bleeding to speak of, and the man made an uninterrupted recovery. Sir Henry strongly urged that where it is necessary to open the bladder for diseases other than stone, it is better to open the membranous urethra in the middle line, than do either the "lateral" or suprapubic operation; he insisted that the bladder could be efficiently drained and explored through this incision, that most tumors of removable size could be removed through it, and that it was a far simpler and safer procedure than either of the others. In the subsequent discussion many speakers joined issue with him on this point; Mr. Bryant, Prof. Marshall, and Mr. R. Harrison, for instance, preferring the "lateral" incision. But, of course, the chief point raised in the discussion was the diagnosis of the tumors which are capable of this treatment, from those which are not, the most reliable points in favor of the former being youth and the absence of induration on rectal or vaginal examination. Sir Henry Thompson's case will probably be of great service in drawing marked attention to the subject, and especially in encouraging surgeons in exploring the bladder through a perineal urethral wound, which, he says, can be done so easily and so efficiently. As this operation is practically free from danger, it will probably be used as an aid to diagnosis as much as for treatment.

Three meetings during the present session of the Clinical Society of London, over which Mr. Lister presides, have been devoted to the subject of operations upon the kidney. Nephro-lithotomy, or excision through the loin of a stone from the kidney, has been shown to be a very successful operation if the stone be small, as these calculi often are, and the renal tissue healthy. Mr. Battin and Mr. Beck related such cases, but Mr. Godbe contributed a case in which the kidney was greatly enlarged, sacculated, and each sacculus was filled with a good-sized stone: here excision of the whole organ was attempted, but the patient died. Nephrotomy or exploration of the kidney, with or without incision into it, has also proved very useful on many occasions. The operation itself appears to be very free from danger, and in most cases the kidney has been easily exposed. When stone is suspected, a long needle set in a handle, devised by Mr. Barker, is used to puncture the organ in various directions until grating is felt. The incision and drainage of strumous and suppurating kidneys appears to be capable of affording great relief, but as yet has not proved absolutely curative; and at this point a divergence of opinion comes in, some maintaining that in such cases it is better to excise the kidney at once, and others that it affords a better chance to drain the kidney first, and then, when the patient has recovered a certain amount of strength, to do the more severe operation. Further experience is wanted to decide this point; the objection to postponing the excision is that the first operation leads to great induration around the kidney, and increases the difficulty of subsequent nephrectomy.

Nephrectomy, or excision of the kidney, is a very severe operation, and we have just had a series of three fatal cases presented at the Clinical Society; in one the death was from total suppression of urine, and in the two others a dose of morphia, administered soon after the operation, is shrewdly suspected of having, at any rate, accelerated death. The special point on which there is a good deal of doubt here is, whether it is better to remove the kidney through the loin or through the belly. If the organ is very large, it cannot be excised by a lumbar incision, and it appears probable that the abdominal incision will be found to be the better in all cases. We are not so fearful of opening the peritoneal cavity as we used to be, and the removal of the organ can be proceeded with with so much more exactness and ease from the front than from behind. The best abdominal incision seems to be one made in the linea semilunaris. The small intestines are to be well drawn aside, and the peritoneum cut on the outer side of the colon, and that viscus turned in. If, now, the cut edges of this layer of peritoneum are at once united to the edge of the wound the operation in its further stages becomes extra-peritoneal.

THE PUBLIC HEALTH.—The following items, received too late for our last issue, are furnished for the *week ending April 29*. Of ten cities whose reports are before us, only two, namely, Brooklyn and New Orleans, note the presence of *small-pox*. In the former city there were 5 new cases and no deaths; in the latter there were 16 deaths, a decrease of 2 from the number reported the preceding week. *Cerebro-spinal meningitis* caused 3 deaths in Buffalo; 2 each in the District of Columbia and Salt Lake City; and 1 each in Charleston, Milwaukee, and New Orleans. A sudden and notable increase in the deaths from *diphtheria* is observed in Brooklyn, where the deaths, numbering 27, have far exceded those reported in any week during the past three months. The deaths in New York City

for the same week were 37. Buffalo, the District of Columbia, and New Orleans, each report 2 deaths from the same cause. There was a slight improvement in the death-rate from *scarlet fever* in Brooklyn, but the mortality is still unusually heavy. The deaths were 30, as compared with 34 in the preceding week. There were 7 deaths in Buffalo from the same cause. There is nothing specially to note with respect to *typhoid* or *malarial fevers*. *Cholera infantum* has made its appearance in some of the southern cities. There were 4 deaths from this cause in New Orleans. In northern cities this disease does not manifest itself to any great extent until the appearance of the first prolonged spell of hot weather, which usually occurs in the middle or latter part of June. Cases usually begin to appear in May, and increase in number gradually as the season progresses. Coincident with the first period of extreme heat, the mortality suddenly increases and becomes excessive. The maximum death-rate from this cause most frequently occurs in the latter part of June or in the first part of July.

From the mortuary records of *the week ending May 6*, we have selected the following facts respecting some of the prominent causes of death:

Small-pox.—This disease, which has been so widespread throughout the country during the past winter and early spring, is gradually becoming less and less prominent as a cause of death. It still lurks in some of the cities along the line of travel to the far West, and in New Orleans, where it was later in making its appearance. In Cincinnati, where it appears to be most persistent, the people are weary of its presence, and this feeling has culminated, during the past week, in the adoption of a series of resolutions by the Board of Trade, expressive of the inefficiency of the Board of Health, and demanding its reorganization. It is to be hoped that philanthropic motives have been the main incentive to this action. If we mistake not, we have seen the statement that gratuitous vaccination was some time ago partially abandoned on account of the fact that persons able to pay for the operation, took advantage of the opportunity for securing vaccination gratuitously. If this be so, a great mistake has been made, as parsimony in the administration of all matters pertaining to public health is a policy which eventually results in increased expense, not to speak of the evil influences it exerts upon the health and welfare of the people. There were 8 deaths during the week from small-pox in New York City; 4 in Philadelphia; 6 in Pittsburg, with 21 new cases; 1 case reported in Boston; 15 new cases and 1 death in Louisville; 2 deaths in Memphis; 1 death and 5 new cases in Dayton, Ohio; 11 deaths in Chicago, and 2 deaths and 4 new cases in Omaha.

Cerebo-spinal Meningitis.—There was no unusual mortality from this disease during the week. New York City reports 4 deaths, and Philadelphia 3. In some other places one or two deaths were reported for the week.

Diphtheria.—Since the first of the year, diphtheria has been a conspicuously prominent disease in New York City, Philadelphia, Boston, Brooklyn, and Chicago. It still continues in all these places with but slight variation. There were 32 deaths in New York City; 9 in Philadelphia; 10 in Boston, and 34 new cases; 3 in Detroit; 3 in Milwaukee; 2 in Pittsburg; 10 in Chicago, and 1 in Providence. The greater number of places report no deaths from this disease.

Scarlet Fever.—New York City reports a further decrease in the mortality from scarlet fever. The deaths for the week were 55. There were 8 deaths in Philadelphia; and 1 each in Wilmington, Del., and Nashville; 5 in Milwaukee, and 15 cases reported.

Typhoid and Typhus Fevers.—Except in Philadelphia, the mortality from typhoid fever is in no place excessive. In this city the deaths amounted to 25. The unusual prevalence of the disease at this season of the year would seem to indicate the presence of some special cause, which, so far as we know, has not been determined with any certainty. The unusual increment of the death-rate of this disease should be the subject of a careful investigation. The deaths from this cause in New York City were 5. In Boston there were no deaths, but 8 new cases. In a number of other places 1 death is the highest number recorded during the week. There were 4 deaths from typhus fever in New York City.

Measles and Whooping-cough.—These diseases are principally prevalent in New York City. From the former cause, there were 25 deaths; from the latter, 21. There were 6 deaths from measles in Philadelphia, and the same number from whooping-cough in Boston, and 15 from measles in Chicago.

Consumption and Pneumonia.—From consumption there were 123 deaths in New York City; 30 in Boston; 25 in Chicago; 13 in Louisville; 10 in Providence; 8 in Pittsburg; 6 each in New Haven, Detroit, and Indianapolis; and 4 in Wilmington, Del. From pneumonia, 98 deaths in New York City; 37 in Philadelphia; 18 in Boston; 6 in Providence; 4 each in New Haven and Indianapolis; 15 in Chicago, and 3 in Louisville.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending April 29, 1882, indicate that cerebro-spinal meningitis, dysentery, bronchitis, erysipelas, and pneumonia have decreased in area of prevalence. There was no marked increase of any disease reported. Small-pox was reported as prevailing at eight places, as follows: At Plainwell, Allegan county, April 24; in Big Prairie township, Newaygo county, April 26; in Everett township, Newaygo county, April 28; at Detroit and Flint, April 29; at Manistee, April 30; at Grand Rapids (one new case), May 4; and it is unofficially reported that there are, on May 4, two new cases of small-pox at Menominee.

DR. GRAY'S ASSASSIN.—Dr. McDonald, of Auburn, Dr. Flandrau, of Rome, and William H. Bright, of Utica, the commission appointed by the court in the matter of Henry Remshaw, who shot Dr. John P. Gray, of the New York State Lunatic Asylum, report that Remshaw is insane, and recommend that he be committed to some asylum. They sharply criticise the Directors and others who heard Remshaw make threats against Dr. Gray, weeks before the shooting occurred, and did not report the fact to the proper authorities. Dr. Gray is again able to be out.

THE ALLEGHENY COUNTY MEDICAL SOCIETY AND THE NEW YORK CODE.—At the last regular meeting of the Allegheny County Medical Society, Dr. W. H. Daly offered the following, which was unanimously adopted:

Resolved, That the Allegheny County Medical Society hereby expresses its disapproval of the action of the Medical Society of the State of New York, wherein fifty-two of its members assumed to lay aside the existing Code of Medical Ethics and substitute instead a rule inconsistent with the honest convictions and traditional principles of the medical profession in regard to affiliation with those who practice upon the public under the guise of popular dogmas.

THE MEDICAL ASSOCIATION OF PHILIPS COUNTY, ARKANSAS, AND THE NEW YORK CODE OF ETHICS.—The Medical Association of Philips County, Arkansas, in session in the city of Helena, on Thursday, April 27, had its attention called by the President, Dr. D. E.

Byrd, to the changes made in the Code of Medical Ethics by the New York State Medical Society; and after a full and free discussion of said changes and detractions, on motion of Dr. P. R. Ford, the President appointed a committee of three, consisting of Drs. A. A. Homer, F. N. Burke, and Peter R. Ford, to draft appropriate resolutions in regard thereto; who, after a short recess, presented the following:

Whereas, We, the members of the Philips County Medical Association, have discovered with great mortification, among a portion of the members of the medical profession of New York since 1876, a growing dissatisfaction with the Code of Ethics of the American Medical Association, which culminated in the adoption by the New York State Medical Society, at its meeting in February last, of a code which is in direct conflict with a most important part of the law established by the American Medical Association. Therefore,

Resolved, first, That all the infringements and additions to the fundamental law of the American Medical Association are unnecessary and mischievous, and deserve the censure and condemnation of all true men in the medical profession.

Second, That the rule adopted by the New York State Medical Society, governing its members in consultation, in which they declare the right to meet in consultation legally qualified practitioners of medicine, irrespective of any further qualification or restriction, is in direct opposition to the code established by the American Medical Association, and in its operations and bearings tending to destroy the line of distinction that has so long existed between the honest, educated physician and the charlatan.

Third, That the Code of Ethics is a part of the organic law of the American Medical Association, and is above and beyond State organization, and can only be changed by resolution offered in open session to lay over for twelve months, and then by a vote of three-fourths of the members present, and that all the members of the American Medical Association, or members of societies in affiliation therewith, are bound by its obligations, and amenable thereto for all violations, and that in this action of the New York State Medical Society they have offered a gross indignity to the parent association.

Fourth, That the Code of Ethics of the American Medical Association, in its provisions and restrictions, is comprehensive and liberal, and we see no necessity for a change; that the action of the New York State Medical Society, in its abrogation of our law, is hasty, ill-timed, and without a precedent, and deserves the condemnation of the American Medical Association in vindication of its own dignity.

Fifth, Having passed through a similar ordeal in our own State organization, we can most truly sympathize with the just and loyal men of the profession in New York who raised their hands and voices in protest against this effort to throttle organized medicine.

Dr. D. A. Linthicum seconded the resolutions, and they were unanimously adopted, and it was directed that they be forwarded to THE MEDICAL NEWS for publication.

WHAT IS SAID OF THE NEW YORK CODE OF ETHICS.

The action of the New York State Medical Association, sanctioning consultation with all legalized practitioners, has aroused a perfect whirlwind of indignation in medical circles throughout this country and Canada. The condemnation on the part of the medical journals is almost unanimous, and the various State and county medical societies express their dissent in no uncertain tones.—*Mississippi Valley Medical Monthly.*

We are satisfied to regard those who associate with homœopaths, eclectics, and other irregulars as men of the same stripe, cast in the same mental and moral mould. Birds of a feather flock together and aliens are driven out; just upon the same law of kindred association "a man is known by the company he keeps," and those who are not of his kidney shun his contact, and purge themselves of his offending presence. . . . Amongst the American journals the *Record* stands almost alone in its advocacy of the new departure, and we regret to say, judging by its last issue, seems to glory in its shame.—*Canadian Journal of Medical Science.*

RESOLUTIONS OF THE MEDICAL BOARD OF BELLEVUE HOSPITAL ON THE DEATH OF JAMES R. WOOD, M.D.—At a special meeting of the Medical Board of Bellevue Hospital, called on the occasion of the death of the late Prof. James R. Wood, and held on the 6th of May, 1882, it was resolved:

1. That by the death of our late associate the Board has lost a member whose services for a period of thirty-five years as an attending surgeon to this hospital, and whose labors as a clinical teacher, have contributed largely to the usefulness of the institution in the relief of suffering and in the diffusion of the practical knowledge of surgery.

2. The memory of our late associate will ever be gratefully cherished as the founder of the pathological museum connected with this hospital, which he enriched by the gifts of his large and valuable private collection, and which deservedly bears his name.

3. The members of this Board feel that by the death of the late Prof. Wood they have individually lost a generous, warm-hearted, and steadfast friend, as well as valued associate; and that his death leaves a void which must remain unfilled, not only in the hospital, and in the relations of friendship, but in the medical profession and in social life.

4. The Medical Board tenders the heartfelt sympathy of all its members to the family and relatives of the late Prof. Wood in the loss which they have sustained, together with the hope that they may derive consolation from his merited professional eminence, his long life of usefulness, his unblemished character, and his private virtues.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MAY 2 TO MAY 8, 1882.

KING, WM. S., *Colonel and Surgeon.*—The extension of his leave of absence, on account of sickness, granted him in S. O. 251, November 7, 1881, from A. G. O., still further extended six months on account of sickness.—*S. O. 104, A. G. O., May 5, 1882.*

WILLIAMS, JOHN W., *Major and Surgeon.*—Granted leave of absence for six months.—*S. O. 101, A. G. O., May 2, 1882.*

COWDREY, S. G., *Captain and Assistant Surgeon.*—Now awaiting orders, to report to commanding general, Department of the East, for assignment to duty at Fort Monroe, Va.—*S. O. 103, A. G. O., May 4, 1882.*

HOFF, J. V. R., *Captain and Assistant Surgeon.*—To be relieved from duty in Department of the East, and report in person to commanding general, Department of California, for assignment to duty.—*S. O. 103, c. s., A. G. O.*

PORTER, JOS. Y., *Captain and Assistant Surgeon.*—The extension of his leave of absence, granted him in S. O. 17, c. s., Military Division of the Atlantic, is further extended twenty days.—*S. O. 99, A. G. O., April 29, 1882.*

CARTER, E. C., *First Lieutenant and Assistant Surgeon.*—To be relieved from duty in Department of California, and report in person to commanding general, Department of Arizona, for assignment to duty.—*S. O. 103, c. s., A. G. O.*

RAYMOND, H. I., *First Lieutenant and Assistant Surgeon.*—To be relieved from duty in Department of California, and report in person to commanding general, Department of Arizona, for assignment to duty.—*S. O. 103, c. s., A. G. O.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

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ORIGINAL LECTURES.

MÜTTER LECTURES.

ON THE HISTOLOGY OF INFLAMMATION.

Delivered before the College of Physicians of Philadelphia, May 8, 9, and 12, 1882.

BY E. O. SHAKESPEARE, M.D.

ABSTRACT OF LECTURES VIII.-X.

INFLAMMATION IN THE BLOODVESSELS.

GENTLEMEN: I next ask your attention to the inner surfaces of the bloodvessels. They present structures which are very similar in many important points to the serous surfaces, and their minute anatomy and pathology should very properly occupy a place in these lectures immediately following that of the serous membranes. You are, of course, so familiar with the normal histology of the bloodvessels that I can very well dispense with a detailed description of them. I wish, however, to impress upon you the fact that, in the larger arteries in particular, the tunica intima, so far as its relation to the vasa vasorum is concerned, is a non-vascular membrane. It contains no bloodvessels. Indeed, the elastic layer of the tunica intima seems to form, in health, almost, if not quite, always an impenetrable barrier both to bloodvessels and to lymphatics. It appears to be a sharp line of division between those structures of the vessel which receive their pabulum from the vasa vasorum, namely, the tunica adventitia and the tunica media on the one hand, and those of the tunica intima, which, on the other hand, are directly supplied from the lumen of the vessel, through the mediation of its juice-canals or lymphatics. The latter pervade the tunica intima as they do other fibrous membranes, and they receive the fluids of the blood, and return their lymph through minute stomata between the endothelia lining the inner surface of the bloodvessel. Others have succeeded in injecting these lymphatics from the lumen of the vessels, and so have I—thus demonstrating a communication with the blood, which, although usually very sluggish, notwithstanding the nearness to the rapidly circulating vital fluid, is nevertheless direct. There are various means of showing the lymphatic radicles of the tunica intima. Perhaps one of the best is the interstitial injection of nitrate of silver, by means of a hypodermic syringe. Figure 11 reproduces very poorly the appearance of the stellate lymph spaces in the intima of an ox treated in that manner. It also indicates another effect of the silver salt thus applied. I refer to the smaller bundles of fibres seen to constitute the larger bundles which, by crossing in various directions, form lymph spaces of the most varied outline, just as they appear elsewhere. The large bundles of fibrous tissue in the inner coat of these vessels often possess the same characters which have been described in other locations. They may be composed of smaller bundles, which are partially enwrapped with very small flat cells closely applied to their surface, and the stellate lymph spaces, and the flat cells which they contain, have the same relations to the larger bundles and to the smaller ones that were pointed out when speaking of the cornea. But in the intima of the vessels the primary bundles may not always be grouped into larger groups. I should say just here that the minute elastic fibres which are usually present in large numbers in the larger arteries, can be proved to be partly covered by small flat cells in a manner identical with that of the primary bundles of fibrillæ.

FIG. 11.

× 400

There is, particularly in the larger vessel, a lamellar condition of the tunica interna, which can be demonstrated in various ways. The lamellæ which are parallel with the surface of the wall can be separated more or less easily by use of the sharp-pointed forceps.

But one of the easiest and best methods of showing the thickened lamellar sheets of fibrous and elastic bundles is that of excising a small square of the whole thickness of a large vessel, and placing it upon the freezing microtome with the inner surface up. This surface of course cannot be mathematically level at all points. Consequently in the act of making frozen sections parallel with the surface, at some places the knife passes through the lamellæ slightly obliquely, and in consequence the edges of the extremely thin lamellæ are often turned back. Figure 12 very fairly represents such a section of the human aorta, where *c* and *d* were two lamellæ whose planes were not quite horizontal at this place, but were slightly oblique to the plane of the knife. The knife passed in the direction from *b* to *d*, and turned back the edges of the lamellæ at *a*, at the same time slightly raising up the lamella *d*, and exposing to the action of the silver salt, in which the section was subsequently placed, the adjacent surfaces of these two lamellæ. At *b* the action of the silver marked out the boundaries of endothelial cell-plates which at that place existed in a single layer between the two lamellæ. The aorta from which this section was cut was obtained ten hours after death, and was first treated with solid lunar caustic.

At *a* and at various other points the minute flat cell-plates which have been already referred to as partly enwrapping the primary bundles and the small elastic fibres are quite distinct.

We have, therefore, in the tunica interna very much the same order of cells present, and much the same relations of cells, lymph spaces, and fibrous bundles as hold in other fibrous tissues.

Before leaving the normal histology of the vessels, I would particularly direct your attention to a physiological function which seven years ago I recognized in

the endothelial cells lining the inner surfaces of the bloodvessels—*that of the formation of white blood-corpuscles*—and claimed for them normal and pathological properties very similar to those of the endothelial cells which cover the serous surfaces.

FIG. 12.

$\times \frac{200}{1}$

These views, and the observations upon which they were based, were first expressed in an essay on the "Nature of Reparatory Inflammation in Arteries after Ligature," in January of 1877, for which I obtained the Warren Triennial Prize. They were first printed April, 1879, in a lecture on "Reparatory Inflammation in Arteries after Ligature, Acupressure, and Torsion," delivered in June, 1878, as Lecture VII., in the course of Toner Lectures, at Washington, D. C., and published in the Smithsonian Miscellaneous Collections, No. 321. The same opinions and observations were also recorded in the editorial addenda in the American translation of Cornil and Ranvier's "Pathological Histology," published January, 1880.

I am thus explicit, for the reason that in 1881 appeared in New York, under the editorial direction of Dr. Satterthwaithe, a *Manual of Normal Histology*, of which the chapter on bloodvessels came from the hand of Dr. Wendt, of that city. The latter gentleman makes the assertion, in a manner which would lead one to suppose it to be unquestionable, that the endothelia of bloodvessels regularly desquamate, and may give origin to white blood corpuscles; and yet, when upon the next page we read a paragraph printed in small type, it would seem that this statement is only an inference insecurely based upon a supposed analogy of function, perhaps existing between the endothelia of the bloodvessels and the endothelia of the peritoneum. Possibly the authors cited were not aware of my observations, notwithstanding the fact that they had been made known five years ago, and had been more or less widely brought to the notice of the American profession on three different occasions since. At any rate, the author quoted makes no reference to my observations, or to any others directly bearing upon the bloodvessels themselves. And yet some of his reviewers award him what credit there may attach to an original positive observation.

Now, gentleman, we take up the question of *the histology of inflammation in bloodvessels*. In discussing it, time will not allow us to consider all the phenomena which they may present under the stimulus of inflammation. Only a few of the more important changes will be noticed here.

The portions of the walls of larger vessels most remote from the source whence comes the pabulum necessary for the life and activity of the elements, are the most external layers of the tunica intima, and the most internal layers of the tunica media. Naturally these parts should of all others be most liable to necrobiosis. It is just here that the ordinary atheromatous degenerations of the arterial tunics are seated, usually first beginning as a small focus of fatty degenerated cells in the outer layers of the intima, which, in some way, has had its naturally scant supply of nutritive fluid much lessened or entirely cut off. This little focus of fatty degenerated cells acts upon the surrounding elements as a foreign body, and excites perhaps a slow destructive inflammation by which the area of the minute focus spreads. The atheromatous softening may gradually wear away the dense barrier of elastic fibres which separates the intima from the media, as well as extend inward toward the lumen of the vessel. In this manner, the tunica media, as well as the dense layers of the tunica intima of arteries, may be eaten away, and the wall of the vessel prepared for the establishment of an aneurism. In this process of destruction, the minute flat cells which cover the small bundles of fibres, and normally exist dormant in the tissues in immense numbers, no less than the common stellate cell or connective tissue corpuscle, work the destruction of the surrounding tissue.

Primary arteritis in which the pathological changes are of an active proliferating character are on the contrary seated nearer to the supply of pabulum. A chronic endarteritis affects the investing endothelia, and the layer of stellate cells directly beneath. They can be seen to present changes of growth and multiplication identical in appearance to those which have been already mentioned for the serous surfaces. The fixed cells of the layers affected, both the ordinary stellate cells and the minute flat cells, are active in this process of inflammation, whether it result in softening and destruction of the fibrous ground substance, or in a proliferation and new formation. At the same time that the activity of these various fixed cells is unquestionable, it cannot be denied that lymph corpuscles or white blood corpuscles also play a similar part.

FIG. 13.

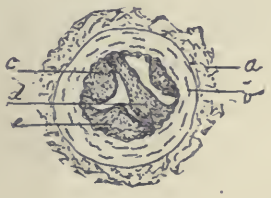
In this chronic proliferating endarteritis it is probable that all the fixed cells (including of course the investing endothelia, which are nothing more than connective tissue corpuscles somewhat modified in shape) play the most active *rôle*, whilst on the other hand in the acute inflammations the superficial changes may be mainly wrought by the white cells of the blood.

One of the effects of inflammation involving the inner surface of the bloodvessels is the swelling, proliferation, or desquamation of the endothelia. Figure 13 is borrowed from the illustrations of the Toner Lecture already mentioned. The same cut also appears upon page 58 of the American edition of Cornil and Ranvier's *Pathological Histology*, It represents a capillary in the mesentery of a frog a few hours inflamed. The endothelial cell *b* was observed to become detached from its bed in the manner explained in the place cited, and to be borne off in the circulation. I was fortunate enough to make a similar observation on one other occasion (*l. c.*).

In the lecture above referred to, I pointed out the fact that arteries are permanently healed after ligature, acupressure, and torsion, by means of a proliferating endarteritis, and that the new tissue which effects the permanent obliteration of the lumen of the vessel is a granulation tissue which springs from and is formed by a proliferation of the tunica intima, and that the blood clot, which is sometimes formed and sometimes not, is merely a foreign body, which, when present, aids in exciting a slow proliferating endarteritis, but which itself is never organized.

Fig. 14 is a sketch of a cross-cut of a small artery in the lung of a dog, the section being one of a large series made under the direction of my friend, Dr. H. Formad, Assistant Demonstrator of Pathology in the University of Pennsylvania, with the object of elucidating the etiology of tumors. In this particular case some chopped periosteum had been injected into the circulation. The animal was killed after 55 days, when numerous minute nodules of bone were found scattered through the lungs. The artery cut was in the neighborhood of one such nodule of bone located near the pleura.

FIG. 14.



a is the tunica adventitia, and *b* the tunica media. *c* and *e* are granulations of the tunica intima projecting into the lumen of the vessel. *d* is a complete bridge of similar tissue extending from wall to wall. Here also the same process has been at work which effects the closing of the lumen of an artery after ligation or torsion. In this case we have a proliferating endarteritis established by the presence of an embolus.

Whilst studying experimentally the process of reparatory inflammation in arteries, numerous opportunities presented themselves of observing the method by which a vein closed, for it frequently happened that the needle or the forceps or the ligature included with the artery the accompanying vein.

These accidental preparations afforded the most convincing evidence that at least in these cases the lumen of the vein was obliterated by precisely the same process, namely, that of a proliferating inflammation of the inner coat of the vessel.

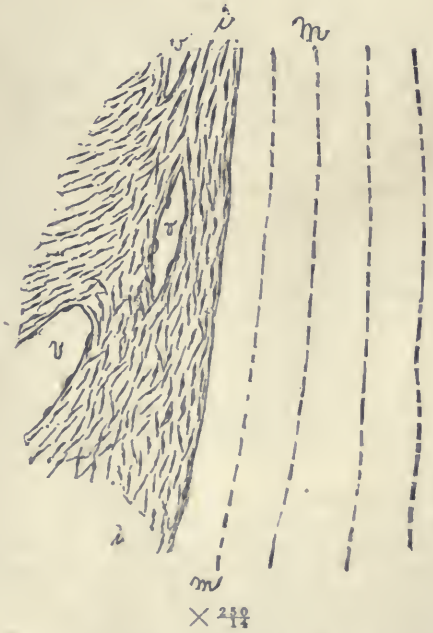
Figure 15 represents under a low magnifying power a portion of a longitudinal section of a jugular vein of a goat, which, some days before the animal was killed, had been ligated. Two ligatures were applied a little distance apart. The figure represents at *c* the lower ligature; *a* are sections of the adventitia; *m* sections of the media; *i* sections of the intima, which even at this level is the seat of a proliferating inflammation; *p* is a mass of the tunica intima greatly swollen and proliferated, in the midst of which lacunæ (*v*) appear. The whole space between the inner wall of this inflamed and proliferated tunica intima is occupied by a blood-clot L of a stratified or non-homgeneous constitution, and showing no signs of organization.

FIG. 15.

$\times \frac{40}{1}$

Figure 16 shows, as seen under a high power, the constitution of the inflamed and proliferated tunica intima. The drawing was made from the portion marked x. The proliferated intima *i* is seen to consist of a mass of endothelioid cells, which, when seen in profile, as in the figure, appear spindle-shape. The lacunæ (*v*) are lined with a single layer of endothelial cells; *m* represents an outline sketch of the tunica media.

FIG. 16.



$\times \frac{250}{14}$

I am indebted for the use of the section from which Figs. 15 and 16 were drawn, to the kindness of Dr. L. Pilcher, of Brooklyn, who some weeks ago, by invita-

tion, read a most interesting and instructive paper "On the Pathology of Ligation of Veins," before the Philadelphia County Medical Society. I believe the section was prepared by Dr. Hunt, of Brooklyn.

I have made use of the section and the drawings, which I myself sketched, in order to show one more example of a proliferating inflammation of the tunica intima bringing about the closure of a vein after the application of a ligature.

GENTLEMEN: At length we have reached the last lecture of this course. I shall occupy the hour by a general review of the salient points presented during the course of the nine preceding lectures.

You will remember that in the lectures on the cornea I described the ordinary fibrous bundle known to authors as composed of small intermediate or primary bundles of ultimate fibrillæ; and stated that each of these primary bundles possesses an average diameter about equal to that of the red blood-corpuscle, and is partially invested by minute, thin, flat, or spindle-form cells, closely applied to its surface, in this particular confirming the statements of Thin. The fibrous ground substance is actually teeming with myriads of these minute cell-plates, which ordinarily are no more visible than the cells which constitute the shaft of a hair or the corneous part of a finger-nail, but require special treatment for their demonstration in healthy adult tissue. The so-called corneal corpuscle is a complete analogue of the flat-tendon cell-plate of Ranvier, or the branched connective tissue corpuscle of the ordinary fibrous tissues. It is applied to the surface of the ordinary large fibrous bundles of authors, and usually in part lines one side of a lymph space formed by the crossing or apposition of these bundles.

These larger bundles are frequently grouped into broad thin bands or ribbons which correspond to the groups of bundles in tendons, and which like the latter have a complete investment of flat endothelial cell-plates. It is these broad bands of fibrous bundles which constitute the lamellæ of the cornea. Between some of the lamellæ exist more or less complete sheets of endothelial cells. In the normal cornea, beside the two classes of cellular elements known to exist therein, namely, the lymph or wandering cell, and the branched corneal corpuscle or common fixed cell, there are, then, sheets of ordinary endothelial cells and millions of minute flat cells enwrapping the primary bundles.

Under the stimulus of irritation the endothelial cell plates, and the myriads of little dormant cells resting upon the surface of the small primary bundles of fibres are awakened to their primitive activities no less than the long known corneal corpuscle, all tend to return to their embryonal state, and when thoroughly rejuvenated seem to be rehabilitated with their original powers, both of destruction and of repair. Often in slight injuries to the cornea the inflammatory process commences and proceeds to the complete repair of the damage done, without the intervention of the emigrant cells from the blood at the limb of the cornea, the various fixed cells and their offsprings being entirely capable, in such cases at least, of performing the work of reconstruction.

You will recollect also that I claimed for the so-called homogenous, structureless, intercellular matrix of hyaline cartilage a positive fibrous constitution, in this agreeing at some points with a few histologists who have recently examined these tissues. Furthermore, your attention was called to the analogies which exist between the so-called cartilage cell and the connective tissue corpuscle in other locations, particularly to the metamorphoses of the fat vesicle in the connective tissues, to those of the cartilage cell, and to those of the lymph vesicle of Klein. And I endeavored to show that the so-called cartilage cell presented the form and characteristics of the flat endothelioid cell-plate which in one place constitutes the branched connective tissue corpuscle; in another place the flat cell-plate of Ranvier; in still another the fat vesicle, and in yet another the lymph vesicle of Klein. And I indicated the method of successive formations of capsules and of so-called daughter cells. I attempted to trace out an arrangement of the fibrous ground substance or intercellular matrix, very similar to that of the cornea, and stated that there were strong evidences of the existence here also of the minute flat cells, partly embracing the surface of primary bundles.

More sweepingly than in the cornea, but even with much more confidence, I claimed for the fixed cells of the cartilages the sole agency, up to a certain point in the process of inflammation—admitting the possibility of interference by the emigrant cells of the blood only after great changes had already been wrought.

When discussing the serous membranes, I spoke of certain physiological functions of lymph and blood formation, which the fixed cells of certain portions of the peritoneum seemed to possess, and alluded to the fact that in these structures we often have areas of greater or less extent which may be regarded as non-vascular. In considering inflammation of these surfaces, I pointed out evidences of the active agency of all the fixed cells in the inflammatory process.

It is unnecessary for me to refer again to what I have so recently said concerning the bloodvessels.

In the course pursued in these lectures, I have purposely avoided as much as possible the examination of inflammation in tissues where the influence of the bloodvessels may be said to be dominant. In the first place, I wished to escape, as much as possible, the confusion which the presence of emigrant white blood corpuscles throws over the changes which are passing in the tissues affected by the process of inflammation; in the second place, I did not see the utility of again going over ground which has been so admirably studied by Cohnheim and some others. I do not question the fact, indisputably demonstrated again and again, of emigration of the white elements of the blood in inflammations whose influence reaches the walls of the bloodvessels. I have often observed the phenomena of emigration myself.

The chief issue I join with Cohnheim and others of that school is, that the fixed cells of the connective tissues, under the stimulus of an irritant, return to the condition of embryonal cells, and give birth to embryonal cells, contributing to the mass of embryonal elements by which tissues are destroyed in the process of inflammation, and by which also tissues are regenerated when the damage of injuries is repaired.

It is, as I believe, the most unwarrantable exercise of dogmatism to assert that the fixed cells can give rise only to cells endowed with iconoclastic powers, whilst it is the emigrant cells of the blood or their direct progeny which solely possess the power of reconstruction. There are no facts which, when crucially examined, can give support to such a belief, for it is a mere hypothesis.

In closing, I thank you, gentlemen, for your attendance and attention. My acknowledgments are also due, and are thus publicly and heartily rendered to my friend, Dr. J. H. C. Simes, who has kindly assisted me in some of the preparations which I have exhibited under the microscopes; to my friends, Carl Seiler, M.D., Henry Formad, M.D., and George Piersol, M.D., who have kindly extended me various facilities for the illustration of these lectures.

ORIGINAL ARTICLES.

LUXATION OF FEMUR; REDUCTION AFTER FIVE WEEKS.

BY H. R. WHARTON, M.D.,
SURGEON TO CHILDREN'S HOSPITAL, PHILADELPHIA.

HENRY P., æt. forty-six years, was admitted to the University Hospital on August 28, 1879, with the following history: Five weeks previous to his admission, he had fallen from the overhead of a barn to the floor, a distance of twenty or twenty-five feet, and had received an injury of the left limb. When first seen the nature of the injury was not recognized, but two weeks later a dislocation of the hip was discovered, and three different attempts were made for its reduction, without success.

Upon examination of the patient the left limb was found fixed, adducted, and shortened to the amount of one and a half inches, a corresponding change was also found in the position of the trochanter on the injured side.

From the symptoms presented, it was supposed to be a dislocation of the head of the femur backwards on the ischiatic notch (or dorsal below the tendon of the obturator internus, Bigelow).

The patient being etherized, the thigh was flexed on the pelvis, and rotary motions were made to break up adhesions; when sufficient motion had been obtained, the usual manipulations for the reduction of dorsal dislocations were practised, but without avail, although the head of the bone changed its position slightly.

After several attempts had been made to effect reduction by manipulation, extension was made by means of a compound pulley attached to the thigh, counter-extension and fixation of the pelvis being employed at the same time; these attempts also proved unsuccessful.

Prof. Ashhurst, who saw the case with me, now suggested that the angular extension described by Bigelow be tried; accordingly, a band was placed around the thigh, and to this was attached the hook of a compound pulley suspended over the patient by a tripod; the pelvis was firmly fixed, and extension was made in this direction for several minutes, then suddenly let up, and the limb abducted and rolled inwards; at this point the head of the bone was found to have changed its position and the luxation to have been converted into one of the thyroid variety; this was attested by measurements. Manipulations were now made to effect the reduction of this dislocation, which converted it again into a dorsal dislocation; after several more attempts at reduction, during which the head of the bone changed its position from one point to the other, it assumed its place in the acetabulum, and by measurement the shortening was found to have disappeared.

After reduction the trochanter on the affected side was found to be much more prominent than that on the sound side, probably due to the filling up of the acetabulum.

Broad straps of adhesive plaster were then placed over the trochanter and around the pelvis. An extension apparatus was applied, to which a weight was attached, and lateral support was given to the limb by sand-bags.

The patient complained of severe pain in the hip for several days, but this gradually wore away, and he was discharged from the hospital seven weeks after his admission, walking with the aid of a cane.

The reduction of old luxations of the femur is a proceeding attended not only with difficulty, but, in many cases, with danger, depending upon the position of the displaced bone, the time it has been out of place, the change that may have taken place in the acetabulum, and the amount of the adhesions that have occurred between the bone and the surrounding parts.

The time within which these luxations are reducible, has been set down by Cooper at eight weeks; but the latter authority himself cites a case of dorsal luxation said to have been reduced after the lapse of five years, by a fall from a berth on shipboard, and Agnew[1] mentioned twenty-nine recorded cases in which old luxations of the hip were reduced at periods varying from a few months to five years. Bigelow,[2] in discussing this subject, says: "That much depends upon the condition of the acetabulum and head of the bone, and as long as the socket was still excavated and the bones were not deformed by osseous growths, I should feel quite confident of breaking up any adhesions, lacerating the newly formed capsule, and replacing the bone by the great power of the femoral shaft as a lever and of the flexed leg in rotating the head of the bone around the main ligament."

Old ischiatic or obturator luxations are generally conceded to be much less amenable to treatment than those of the iliac or pubic variety; Malgaigne assigns a period of two years or more for the reduction of a dorsal luxation, and only fifteen days for that upon the ischiatic notch. But it must be remembered that conditions may exist which will render any of these forms of luxation irreducible at a comparatively early period.

The amount of adhesions between the head of the bone and the surrounding parts is another element affecting the prognosis, and bears some relation to the injury done to the soft parts at the time of the production of the luxation.

In this connection should be mentioned the changes which occur in the acetabulum in old luxations, rendering it shallow either by absorption of its edges or by the filling up of the cavity by fibrinous or bony material, and the osseous growths that may originate from the pelvis or the displaced bone, any or all of which may offer a serious obstacle to manipulation, and render a complete reduction impossible.

Among the accidents which may follow the attempts at reduction of old luxations, is the rupture of extensive adhesions, which may be followed by the laceration of blood-vessels, the formation of abscess, and injury to the sciatic nerve. Mr. Hutchinson[3] mentions a case in which the latter complica-

[1] Agnew's Surgery, vol. ii., p. 106.
[2] Bigelow: Dislocation and Fracture of the Hip, p. 107.
[3] Med. Times, 1866. Bryant.

tion occurred, and which was followed by paralysis of the limb.

Another accident which has frequently happened is fracture of the neck of the femur, which seems to have undergone fatty degeneration or atrophy from long disuse; it has occurred in the hands of the most skilful surgeons, and does not constitute as serious a complication as might be supposed, as it is generally followed by the production of a false joint at the seat of fracture, and leaves the patient with a useful limb.

The fact is not to be overlooked that in certain unreduced luxations of the hip, the head of the bone has formed for itself a new articular cavity, which permits of a certain amount of motion, and gives the patient a fairly useful limb; the probabilities of this occurrence are said to be greater in the ischiatic luxation than in the other varieties.

In irreducible luxations, where the pressure of the head of the bone causes pain, or where the deformity interferes with the patient's locomotion, much may be done to remedy this and give the patient a useful limb, by performing Adams' subcutaneous osteotomy of the neck of the femur, or of the bone below the trochanters.

The manipulation for the reduction of old luxations of the femur after the breaking up of adhesions, is the same as that employed in the reduction of recent luxations, except that the application of more force may be required, and for this purpose the compound pulley may be found convenient; the use of the angular extension apparatus of Bigelow[1] is particularly indicated in cases of luxation of the dorsal or dorsal below the tendon variety, as offering the best chance of accomplishing reduction, and lessening the risk of fracture of the neck of the bone.

MEDICAL PROGRESS.

EXCISION OF THE PYLORUS.—On April 5th, at the Manchester Royal Infirmary, MR. F. A. SOUTHAM removed the pylorus, along with nearly a third of the stomach, from a man aged 43, suffering from carcinoma of the parts which were taken away by operation. The patient had been under the care of Dr. James Ross for the relief of symptoms of pyloric obstruction. A hard and freely movable mass could be felt through the abdominal walls; and operative measures were determined upon at Dr. Ross's suggestion. The operation was performed by Mr. Southam, with the assistance of Mr. Whitehead, antiseptically, after the method adopted by Prof. Billroth. Thirty-nine silk ligatures were found necessary for uniting the duodenum to the stomach. The shock succeeding the operation, which lasted one hour and a half, appeared to be very slight, and for twelve hours the patient's condition was all that could be desired. No sickness ensued; the pulse was very fair; and the temperature did not fall below 97.6°. Towards evening, the temperature rose gradually; and, fourteen hours after the conclusion of the operation, death occurred somewhat suddenly, apparently from collapse, but "no doubt," in the opinion of the operator, "as the result of that acute form of septicæmia, or rather septic intoxication, to which Dr. Marion Sims has directed attention, and which is, no doubt, the real cause of death in many cases of abdominal surgery, especially where no outlet is afforded for the discharges." The temperature just before death had risen to 102°. At the necropsy, the condition of the parts around the seat of operation was carefully examined and tolerably firm adhesion was found to have already taken place between the cut surfaces of the stomach and the duodenum. There were six and a half ounces of blood-stained serum in the peritoneal cavity.—*Brit. Med. Journ.*, April 15, 1882.

PRIMARY CANCER OF THE LUNGS.—At the meeting of the Pathological Society of London held April 18, 1882, DR. FENWICK showed a specimen of malignant disease of the right lung: he considered it to be a cancer, but as no sufficient microscopical examination had been made, this question remained doubtful, and was referred to the Morbid Growths Committee for settlement. He referred to the rarity of primary cancer of the lung, and gave some interesting statistics on this point. If the now generally accepted embryological classification of cancer be true, there is no difficulty in accounting for primary cancer in the lung, since epiblastic elements largely contribute to its formation. Undoubted cases of primary cancer have been recorded from time to time; though, compared with some other organs, the lungs are remarkably exempt from this form of disease, despite the varying and almost constant irritations to which they are subject. During the discussion, Mr. Butlin referred to the dissemination of cancer by the inhalation of cancerous particles from a diseased tongue. This view has frequently been advanced, but the grounds for accepting such a method of inoculation or grafting do not appear to us sufficient. It is well known that all attempts to engraft cancer even on animals predisposed to the disease, such as female dogs and cats, have hitherto failed; thus, while it would be premature to deny the possibility of such a mode of infection, it seems somewhat hazardous at present to trace a causal connection between lung and tongue cancer, such as the one just referred to, while there are other and more usual methods of accounting for its spread. Thus, the lymphatics about the tongue are numerous and are early implicated in disease of this organ. The blood into which the lymph is poured at the root of the neck after passing through the heart next circulates in the lung, and hence it is not difficult to understand the frequency with which these organs are affected with secondary deposits. There are still many interesting points to settle as to the histogenesis of cancer. For while the embryological doctrine of its origin holds good in a large proportion of the cases, yet a growth resembling true cancer is occasionally found in structures which are derived from the middle embryonic layer. Embryologists, it is true, are not agreed as to the exact origin of some organs; they would do well to study these moot points in the light of the pathological degenerations to which such organs (as the ovary and testis, for instance) are liable.—*Med. Times and Gaz.*, April 22, 1882.

NERVE-STRETCHING IN NEURALGIA.—MM. HAIRION and WARLOMONT report, in the *Annales d'Oculistique* (Feb. 1882), an interesting note by M. COPPEZ on a case of constant facial neuralgia of twenty years' duration cured by elongation of the affected nerve.

The unfortunate patient had been the prey of numerous dentists who, at his own request, had taken away more than half the jaw on the diseased side, leaving him poorer in teeth and money than before, but quite as well off as regards the pain. On entering the hospital, he presented all the signs of facial neuralgia; redness of the skin, lacrymation, acute pain, etc. M. Coppez performed elongation of the infra-orbital nerve with the happy result of a complete disappearance of all pain.—*Revue Scientifique*, March 25, 1882.

[1] Bigelow, loc. cit., p. 117.

TANNATE OF PELLETIERIN AS A REMEDY AGAINST TAPEWORM.—Among the anthelmintics hitherto employed, none seems to produce so certain an effect as that which has been lately prepared from the cortex radicis granatorum, and which has been named by its discoverer, MR. TANRET, of Troyes, Pelletierin. Several salts of this alkaloid have already been produced. The sulphate, which was at first employed by the discoverer, frequently disappointed him, when employed in 0.5 grm. doses. Hence, either the dose of the sulphate was increased or the tannate was administered by preference, since the former is hygroscopic and more expensive, but does not differ in its action from the latter. The tannate is a grayish-white powder, which is almost insoluble in water.

Pelletierin being very highly recommended by the French physicians, Dr. Witt (*St. Petersburger Med. Woch.*) tested its qualifications in six cases. Of these, three suffered from Bothriocephalus latus, two with tænia, and the sixth, although he was not able to show any section of tapeworm, determined to subject himself to the same treatment, being under the impression that he had tænia. The patients harbored these parasites for some length of time, varying from 1½ to 8 years, and had used the various remedies to effect expulsion, always with the same result, viz., the head remaining. After the usual preparatory treatment, tannate of pelletierin was administered in a dose of 1.5 grm., and 2 to 3 hours thereafter, Ol. Ricini 15.0. The result in the five cases first named was a brilliant one; in every case the worm was expelled entirely, coiled up in the form of a ball.

In the sixth no effect whatever was produced, probably on account of the absence of any parasite. In no case was any disagreeable symptom experienced, except in the individual without the tapeworm, who was attacked with a transient sensation as if he had swallowed opium, this feeling disappearing after an hour. The alimentary tract was not disturbed, no subsequent dietetic measures being necessary.—*Cincinnati Lancet and Clinic*, April 1, 1882.

ECCENTRIC HYPERTROPHY AND ACUTE DILATATION OF THE LEFT VENTRICLE IN NEPHRITIS SCARLATINOSA.—DR. OSCAR SILBERMAN (*Jahrb. f. Kinderheil.*, xvii., B., 3 H.) concludes from his researches that:

1. In the course of nephritis scarlatinosa we may have an eccentric hypertrophy of the left ventricle.

2. If from any cause whatever the cardiac muscle has become relatively functionally insufficient, we find, instead of eccentric hypertrophy, acute dilatation of the left ventricle.

3. Whether we have hypertrophy or dilatation of the left ventricle, in every case the disturbance of compensation begins with a dilatation which is first clearly noticed at the apex.

4. The murmur over the mitral valve is only temporary when we have a compensating cardiac hypertrophy, but continues until the occurrence of death, when there is only acute dilatation.

The author hopes that his researches will lead to others, and that the study of cardiac hypertrophy in connection with acute nephritis may elucidate its relation to chronic morbus Brightii.—*The Amer. Journ. of Obstetrics*, April, 1882.

A NEW TEST FOR GASEOUS AMMONIA.—When fuchsine is dissolved in water and dilute sulphuric acid added, its red color will be changed to a yellowish-brown (the mono-acid becomes converted into the di- or tri-sulphate). If strips of unsized paper be dipped in a not too dilute solution of rosaniline and dried, they will appear—similar to turmeric—of a beautiful yellowish color.

Paper prepared in the above-described manner is permanently colored carmine-red by gaseous ammonia. The action of the ammonia is to convert the poly-acid rosaniline into a monacid fuschine. This paper is of use for the detection of ammonium salts when they are present in small quantities. The substance to be tested is placed in a bottle and moistened with calcium hydrate. The bottle is closed with a piece of the test-paper attached to the lower part of the stopper. It is best to employ the paper when it is in a dry state, because when it is moistened it becomes bluish and its change to red is not so readily perceptible. In order to hasten the decomposition of the ammonium salts, the bottle with its contents may be warmed, as the paper is not affected by steam. By this means a beautiful red color may be produced with 0.0005 gramme of ammonium chloride, and 0.0005 gramme ammonium carbonate in a very short while. When it is exposed to the air it is liable to be attacked by moisture, though only after some time; it is therefore best to preserve it in well-closed vessels. It cannot, however, be kept indefinitely, as it is too fragile, whereupon it is best to prepare a fresh supply.—*New Remedies*, May, 1882, from *Chemiker Zeitung*, V., 952.

EXTRAPERICARDIAL ANEURISM OF THE AORTA TREATED BY GALVANO-PUNCTURE.—DR. E. GALLICO (*Gaz. Med. Ital. Prov. Venete*, Dec. 31, 1881) records an interesting case of aneurism of the aorta, in which galvano-puncture was resorted to as a last resource. The patient was aged fifty-seven, and, when first seen, presented a small tumor in the third right intercostal space. The continuous current from Onimus' machine was first tried, in sittings of a quarter of an hour's duration. These not producing any beneficial effects, galvano-puncture was next employed. The operation was performed six times within three months. In four of the operations three needles were employed; in the first and last, four. After each successive application the tumor presented a remarkable hardness and consolidation in its central portions. In the intervals of treatment the tumor was covered with layers of adhesive plaster, as there appeared imminent danger of rupture. The author remarks that, though this case ended unsuccessfully, it does not shake his confidence in a method of treatment which he has more than once seen result in a cure.—*London Med. Record*, April 15, 1882.

A NEW ANTISEPTIC.—PROF. BARFF, whose name is well known in connection with his process of preserving iron from atmospheric influences, read a paper at the Society of Arts on the 29th ult., in which he introduced a new product to the attention of his audience. The product obtained by the action of boracic acid upon glycerin is a body analogous in its composition to fats, consisting of glyceril united with boracic acid instead of a fatty acid. The following is the formula showing the formation and composition of boroglyceride, the name given to the new compound:

$$\text{Glycerin } (C_3H_8O_3) + \text{Boric hydrate } (H_3BO_3) = \text{Boroglyceride } (C_3H_5BO_3 + 3H_2O.$$

At ordinary temperatures boroglyceride is an odorless, transparent, jelly-like body, almost without taste, although, when placed upon the tongue in its pure state, it leaves behind a "smack" not unlike that caused by alum. According to Professor Barff, boroglyceride is a most powerful antiseptic, and being in its diluted form practically tasteless, it is likely to be of great service in the preservation of food. For preserving food, solutions were used varying in strength from 1 in 20 to 1 in 60, and meat, fish, and many articles of animal food, after being steeped in such a solution for twenty-four hours, had been found capable of being transported to or

from a tropical country without undergoing any putrefactive change. Cream and milk had been found to keep good almost indefinitely if mixed with a proportion of this antiseptic solution, and both the milk and cream so treated had been partaken of with relish, without any suspicion that they were not perfectly fresh from the cow. For the preservation of pathological and anatomical specimens boroglyceride is likely to be of value; but if it really prove a tasteless and effective antiseptic, its chief field for employment will doubtless be in the food market. With regard to the use of boroglyceride as a food-preservative, the important question has been asked, and is likely to be asked again, whether, when taken into the body, it is innocuous. Boron is not a normal constituent of the body, and the question is a perfectly natural one to ask. Experience alone can furnish the answer, and up to the present time experience has answered in the affirmative. Professor Barff stated that not only had he taken large quantities himself, but a near relative had taken an ounce a week for nearly eighteen months, and the boys and teachers of Beaumont College had also taken large quantities of milk preserved with it, and as yet no evil effects of any kind had been observed. We have been favored with a letter from Mr. Arthur Robottom, who has considerable knowledge of borax both scientifically and commercially, and he also repudiates the notion that any harm is likely to happen from its admixture, as a preservative, with articles of diet.—*Lancet*, April 22, 1882.

CASE OF INTRAFŒTATION.—At a meeting of the Kazan Medical Society (*Vratch. Vedomosti*, No. 1, 1882), DR. LUBIMOFF showed a very interesting case of *fœtus in fœtu*. In a female child, born alive at full term, there was found a subcutaneous perineal tumor, the right half of which was dense and the left soft. On post-mortem examination, the author discovered that the left half of the tumor contained two cysts; the right enclosed various parts of another fœtus, namely, a fully developed foot with six toes, a rudimentary upper extremity, and a stomach. Between two divisions of this tumor were found two small dermoid cysts, with cubic epithelial cells, striated muscles, pieces of cartilages, and bones (with marrow).—*London Med. Record*, April 15, 1882.

TAPPING THE BLADDER THROUGH THE PROSTATE.—MR. REGINALD HARRISON continues the history of the case in which he performed puncture of the bladder for retention of urine from the perineum through an enlarged prostate. After the bladder was tapped, he says, for about six weeks his patient passed urine through the prostatic canula. His health rapidly improved, and he was able to go about as if nothing ailed him. Then it was noticed that urine in gradually increasing quantities began to flow through the natural passage, so much so as to lead to the inference that, for some reason or other, the prostate was ceasing to obstruct micturition.

On January 28th the prostatic canula was removed; the puncture healed in the course of a few days, and with this the bladder gradually proceeded to recover its natural function and power. During the day-time, he now holds his urine for two or three hours, and at night he gets up twice, and sometimes thrice, to micturate. It may be said that all functional symptoms of enlarged prostate have ceased to exist.

On the day of his admission into the infirmary, when the puncture was performed, rectal examination, made both by the house-surgeon, Mr. Laimbeer, and by Mr. Harrison, left no doubt that the prostate was greatly enlarged. Upon this point there could be no other conclusion. Now it is found that the enlargement has almost disappeared; in fact the finger, by the rectum, discovers but little that may be regarded as abnormal—a strong contrast to what previously existed. Here, then, is a case where a surgical proceeding on an enlarged prostate was followed by its rapid atrophy, a result which, so far as is known, has not been noted before. It may be urged that rectal examination affords evidence that only one side of the enlarged gland has thus become reduced; it must, however, be remembered that a return of the power and function of micturition warrants a conclusion that a corresponding change has taken place in the vesical aspect of the gland.

Though Mr. Harrison at present is able only to narrate one case, it will be taken for what it is worth, and as capable of being imitated.

He desires to record it as bearing upon the radical treatment of an affection for which little has hitherto been done.—*Brit. Med. Journ.*, April 8, 1882.

PROLONGED GESTATION.—In the May number of the *New York Medical Journal and Obstetrical Review* DR. LOUIS A. RODENSTEIN, of New York, reports four cases of prolonged gestation, and remarks that the number of cases cited upon undoubted authority by every writer on obstetrics, and the cases constantly reported as occurring under the personal observation of general practitioners, go to show that prolonged gestation is not a myth, and especially that it should not be explained away by questioning the virtue of the mother. How long the duration of the period of gestation can extend beyond the normal time is not yet determined, perhaps can not be determined, but that it may extend over two months is apparently settled. The same principle is involved, whether the uterus tolerates the presence of the child three days or one hundred and forty-five days (Professor Meigs's "Report") after the natural term of gestation has expired. He believes that, after the uterus has performed its physiological function of gestation for the natural term, it rests from the work of gestation proper. Why does it not, then, exercise the function of expulsion? That question he does not attempt to answer, but believes that after gestation has performed its proper and peculiar work the growth of the child is complete, and it thereafter lies dormant in the womb. Otherwise the child would grow to huge size, and its delivery in the natural way would be impossible; whereas in the cases cited the size of the child at the expiration of the period of prolonged gestation was normal.

HEREDITARY LEAD-POISONING.—DR. B. RENNERT, of Frankfort, claims (*Arch. für Gynäkol.*, Bd. xviii., Heft 1, p. 109) to have noticed a peculiar form of hereditary lead-poisoning, in hydrocephalus or a disproportionate size of the head, but without signs of rickets or any special tendency to convulsions. His observations were made on eleven families, with seventy-nine children, among the inhabitants of a village in Hesse, where most of the population are employed in the glazing of pottery, and suffer largely from chronic lead-poisoning. Half the children died in the first few years of life, and the survivors suffered as described.—*Med. Times and Gaz.*, April 22, 1882.

POISONING BY PHOSPHORUS BY THE RECTUM.—LANDERER relates in the *Archiv der Pharmacie* for the present year a case in which a woman, in order to come into the possession of a large inheritance, poisoned a boy, aged 15, by introducing the ends of phosphorus matches into his rectum. The boy died the same night, with very severe pain and inflammation of the rectum. The murderess committed suicide soon after her apprehension.—*Brit. Med. Journ.*, April 8, 1882.

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THE MEDICO-LEGAL QUESTIONS OF THE MALLEY TRIAL.

IN this case, now proceeding before a court and jury at New Haven, there are points of medical interest, a brief discussion of which may be useful to our readers. It is no part of our duty, as medical journalists, to sift the evidence, to adjudge the guilt, or to declare the innocence of the accused parties, nor ought we attempt to influence opinion on any of the controverted questions, except such as come within our province.

In the first place, we congratulate the medical profession that it is spared the humiliating spectacle—too often exhibited—of glaring incompetence in the witness-box. Competent hands have conducted the autopsy, and a clear intellect has detailed its results. A chemical expert has had charge of the toxical investigation, every process has had an adequate explanation, and every conclusion is justified by the production in open court of the poison. Two points on which we may comment, without in any way prejudging the case, are the *post-mortem* evidences of drowning, and the toxicological relations of arsenic.

Jennie Cramer was found dead in the water near the beach, and sufficient arsenic to kill was recovered from her body. Under such circumstances, the questions to determine are, whether the body was thrown into the water, after death by arsenic, or whether drowning was the mode of dying. The testimony for the State was, with unanimity, in favor of the former proposition. Without presuming to decide this point, we may at least attempt to ascertain how far the statements of the witnesses are supported by medico-legal authorities. Dr. Prudden, who conducted the autopsy, said there were none of the usual indications of death by drowning. Frothing at the nose and mouth, frothy mucus in the air-passages; goose skin (*cutis anserina*); sodden hands (washerwoman's), clenched hands, sometimes holding firmly grass, sand, or other objects seized in the final struggle; water in the bronchial tubes and lungs, which may contain sand, mud, or other substances indicating whence derived, and also the same in the gullet and stomach; the veins of the brain, the great venous trunks, and the right cavities of the heart distended with black blood, whilst the left cavities are empty, are the conditions present after death by drowning. Dr. Prudden disclaimed the opinion that any single sign is conclusive, and rightly held that it is the coincident occurrence of them all which must in any case determine. In this position he is supported by the medico-legal writers. Of these, the American Beck, and the German Caspar, have almost created the subject in its modern aspect, and have furnished the facts and opinions upon which succeeding authors have depended. Beck's description of drowning is classic, and affords a clear conception of the mechanism of the lesions. Caspar insists that the most conclusive evidence of drowning is furnished by the presence in the stomach of water containing impurities, filth, etc., and, in such an example as that of Jennie Cramer, of sea-water.

The most interesting subject from the scientific point of view is the poisoning by arsenic. Prof. Chittenden, who conducted the examination, gave a luminous account of the processes employed, and exhibited the poison to the Court and jury. His estimate, based on an examination of different parts, was that three grains and a fraction (3.1192 grs.) was the amount present in the body at death. From two to three grains, under circumstances favorable to the operation of the poison, may be assigned as a fatal dose in an adult. Very large doses—from sixty grains to two ounces—have been taken and recovered from; but such doses were received on a full stomach, and quickly ejected by vomiting. Does arsenic in a toxic dose invariably produce inflammation of the stomach? Although inserted at any point it may cause inflammation of the stomach by virtue of a selective action, this is by no means an invariable result, even when the dose is a large one. There have occurred cases in which, without vomiting and purging, or gastro-intestinal inflammation, paralysis, coma, and insensibility have supervened. Much depends on the form in which administered. When arsenious acid, undissolved, enters the stomach, absorption is slow, giving time for the local action of the crystals imbedded in the folds of the mucous membrane. As, however, inflammation of the stomach occurs when arsenic is introduced elsewhere, there must be another factor

of unknown origin, the presence or absence of which affects the result. Dr. Prudden, on this point, testified that inflammation of the stomach was not an invariable effect of arsenical poisoning, and quoted statistics in which inflammation was absent in the proportion of 36 to 185, or in one-fifth of the cases.

Several important questions arose about the absorption or diffusion of arsenic. Prof. Chittenden testified that the form in which it entered the stomach materially affected the result. In solution, as arsenite of potassa, or Fowler's solution, diffusion into the stomach veins occurs more quickly than when it enters the stomach as solid arsenious acid. When the solution is taken, symptoms of poisoning may appear within a half hour; when the solid is taken, a delay incident to the process of dissolving occurs, and hence the distinctly toxic effects may be postponed to an hour. The emetic effect due to a large dose, received on a full stomach, should not be confounded with the systemic toxical action. No evidence has appeared in regard to the character of the symptoms experienced by Jennie Cramer. Prof. Chittenden assumes that a soluble preparation of arsenic was taken, because there were no crystals of arsenious acid adherent to the mucous membrane of the stomach, and because the poison was so widely diffused, being found in unusually large proportion in the brain, and also found in the muscles of the back. There is much to be said in favor of these statements, but they are not entirely defensible. That crystals of arsenious acid, after the administration of the powder, have been picked off the mucous membrane is certainly true. But the difference in the diffusibility and systemic action of arsenic in the solid form and arsenic in solution is one of time. When arsenious acid enters the stomach, it obeys the laws of chemical combination, and forms an arsenite with soda or potassa, and diffuses into the blood in this form. After entering into combination with a base, and diffusing into the blood as arsenite, there can be no difference in the distribution throughout the body of the preformed arsenite and the arsenite made in the stomach.

The presence of arsenic in the various organs and tissues, except the bones, is proof of the recent introduction of the poison—for so quickly is it eliminated that, if the victim live fifteen or sixteen days after receiving the fatal dose, none of the poison can be detected after death. This was Orfila's conclusion long ago, after a course of careful experiments, and it has been confirmed abundantly since by actual cases. As elimination proceeds, arsenic can be detected in the urine. Excretion occurs to a greater or less extent also by the liver. In this organ the poison has been found when it could not be detected elsewhere. When arsenic is administered by the stomach, the liver is the first organ reached after diffusion into the blood has occurred. Poisons are not unfrequently delayed in the liver. In this fact we have an explanation, certainly in part, of the extraordinary difference in the action of remedies administered subcutaneously and by the stomach respectively. But the liver, again, filters poisons from the blood and excretes them. Hence it is that poisons are found in the liver in greater proportion than in any other organ or tissue.

In the case of Jennie Cramer, the reasons assigned by Prof. Chittenden for the belief that the poison had been received not more than twenty-four hours before death were conclusive. There was nearly four times as much arsenic found in the fauces, larynx, and trachea as in the kidneys. The quantity found in the stomach and intestines was more than half of the whole amount contained in the internal organs. It is evident, therefore, that there had not been time to effect the elimination of the arsenic taken; it had begun, but had not proceeded far when death overtook the victim.

A DANIEL COME TO JUDGMENT.

WE are not surprised that the advocates of the New York Code have been compelled to seek support outside the medical profession, nor that in the emergency they have availed themselves of the ingenious devices of the law to endeavor to make good their weakening and almost defenceless position. Repudiated with marvellous unanimity by the regular profession from Maine to California, and scouted and jeered by the irregulars themselves, who recognize the true motive of the action, they doubtless distrust, as would be natural under the circumstances, the impartiality of their own judgment. They have, therefore, through Dr. C. R. Agnew, of the Committee which framed the Code, presented the documents in the case to Mr. T. W. Dwight, Dean of the Columbia Law School, with a request for an opinion, which has been published in the *Medical Record*, of May 13th, and furnishes a striking illustration of the fact to which Huxley long ago called attention, that the mental training, habits of thought, and customary frame of mind of many scholarly, and, in some respects, even learned, persons were utterly without avail in fitting them to decide upon such problems as are ordinarily submitted to scientific men for solution.

Probably no profession has suffered more than our own from the attacks of such unqualified and usually self-appointed critics, often prominent teachers or expounders of other branches of thought or knowledge, but who have from time immemorial been the most conspicuous dupes of quacks and charlatans, or the blind opponents of scientific progress.

That Mr. Dwight is no exception to the general

rule, and has in this instance utterly failed to comprehend the true question at issue, is evident. He ignores the impassable gulf which divides rational and, in the best sense, liberal medicine from medical charlatanry, which from the moment of its inception to the present day has been unaccepted by a single scientific writer or teacher; he does not understand that a *consultation* between a regular physician and the adherent of such a school must involve either the renunciation of professed beliefs on one side or the other, or must be a farce, prompted by greed, and alike dishonoring to the practitioner and useless to the patient; he has not comprehended that the irregular, although he may be in other respects amiable and attractive, is yet, as evidenced by his self-assumed title, either mentally incapable of profiting by the counsel of intelligent physicians, or, if he does so, without renouncing his former beliefs, is guilty of deception for the sake of profit, and is, therefore, no fit associate for honorable and truthful men of any profession; and he has not realized the incalculable injury which would accrue from rendering respectable by recognition the views of such pretenders, and thereby increasing their influence for harm in the community.

All this, and much more, which is supposed by the average medical mind to have some bearing on the matter, is ignored by Mr. Dwight, who, with legal acumen, limits himself to an attempt to show that the rule of the new Code applies only to *special cases*, or emergencies; that ethical rules are, after all, mere suggestions, or "guides to judgment;" and that the adoption of the new Code does not compel any one to follow it, but leaves his action in any particular case entirely optional.

As to the first of these points let the new Code speak for itself! "Members of the Medical Society of the State of New York, and of the medical societies in affiliation therewith, may meet in consultation legally-qualified practitioners of medicine." Not a word of restriction as to circumstances or conditions, but entire and absolute freedom to meet and "consult" when, where, and with whom they please!

Mr. Dwight's plea that the succeeding paragraph referring to possible emergencies "must be taken into account," is a mere evasion. If he were ignorant of the fact, he should have been informed that from the days of Hippocrates it has been the pride, the chief honor, of physicians, that in time of need their services were withheld from no man, and we venture to say that in a case of true emergency of any description in which life was endangered no hesitation would be felt by any honorable physician in giving or accepting whatever aid was in his power willingly and cheerfully. Even then, however, in justice to both the patient and himself, no "consultation" with one who differed radically as to principles and methods of treatment would be possible.

Mr. Dwight, after thus insisting that the rule was intended to apply only to emergencies, asserts that abuse of the regulation, *i. e.*, consultations in cases which are *not* emergencies, is to be avoided by leaving the matter to the physician, and that "ethical rules are established only to guide the judgment," which is so palpable and complete an abandonment of his previous position that it takes from his argument whatever glimmer of reason it up to that point possessed.

Ethics—according to his favorite authority, Worcester—is a synonym for morality, and if rules of morality are to be left to the judgment of individuals, if each person is to be "a law unto himself," the sooner we abolish the ten commandments and the civil and criminal statutes the better; this, at least, is the *reductio ad absurdum* to which his argument would lead us.

We would venture, however, to turn our attention to the word "Code," and to remind Professor Dwight that it is "a compilation of *laws*, by authority" (Worcester's definition), and that laws, in this country at least, are usually regarded as restrictive rather than suggestive.

Mr. Dwight in advancing his final argument that because the State authorizes practitioners of other schools to practise medicine, "courtesy to State authority dictates recognition of their fitness for association," assumes, as he does throughout, that all the so-called "schools" of medicine being equal in the eye of the law, rest upon equal scientific basis. And he also assumes that the men whose lives have been devoted to work and to studies which best prepare them for intelligent and well-founded opinions on these very subjects are, in compliance with some imaginary "demands of humanity," or in "courtesy" to some legal phantom, to endeavor to make their honest beliefs, their deep-planted and unalterable convictions, square with others which they regard as in the highest degree absurd and irrational, and are to recognize as their professional equals and associates the ignorant advocates of such dogmas.

That such reasoning and such an argument should represent the chosen, and therefore we suppose the best, legal thought in favor of the views which we oppose is, in itself, conclusive evidence of their essential weakness. We are tempted, however, to exclaim with the clown in Hamlet, "But *is* this 'law'?"

ANTIDOTES TO GELSEMIUM.

IN a recent issue of a contemporary, a fatal case of poisoning by gelsemium is recorded. The reporter laments the absence of any proper antidote to this poison. He used amyl nitrite by inhalation and

electricity, and injected subcutaneously carbonate of ammonia and atropia. These remedies had, it appears, but transient effects, and the patient died in five hours. The use of atropia is a remarkable instance of the kind of physiological reasoning sometimes indulged in by writers for periodical medical literature. There is between atropia and gelsemium similarity, rather than antagonism. In some very important cases of poisoning by gelsemium, morphia subcutaneously has been used with surprisingly good effect. A physician took by mistake in the dark about a half ounce of the strong tincture of gelsemium. In a half hour thereafter he experienced the paralyzing effects—the drooping eyelids, greatly dilated pupil, hanging lower jaw, and the labored respiration. The physician summoned, not knowing the nature of the poison, supposed the symptoms were due to atropia. Acting on this theory, he injected subcutaneously, within a half hour, two grains of morphia, and in two hours the poisoned doctor was able to sit up and give an account of the accident, recovery speedily following. It has also been shown experimentally that an antagonism, to a greater or less extent, exists between gelsemium and morphia.

In treating a case of poisoning, beside the administration of morphia subcutaneously, faradization of the chest muscles and artificial respiration should be employed. As strychnia opposes to a limited extent the action of gelsemium on the spinal cord, this agent may also be judiciously administered hypodermatically.

THE ELECTRIC BRUSH IN THE TREATMENT OF LOCOMOTOR ATAXIA.

IN the first number of the *Neurologisches Centralblatt*, issued in January, we find an important memoir by Dr. Rumpf, of Düsseldorf, on the treatment of locomotor ataxia with the electric brush. It is impossible to deny the relevancy of the statements if true. It is impossible to overestimate the importance of the fact alleged if confirmed. It is asserted by Dr. Rumpf that this almost incurable disease is arrested by applying the electric brush along the back and limbs. Our readers, of course, know that the electric brush is a bundle of fine wires, through which the faradic current is applied to the skin. That the faradic current applied to a part affects the circulation in distant parts, has been shown by Rumpf in another memoir. He has ascertained that a mild faradic current, applied on one side, causes a dilatation of the vessels on the other side. A fact like this throws light on the asserted power of the electric brush over posterior spinal sclerosis. But to the facts: The electric brush, applied to the back and legs of an ataxic of ten years' duration for the space of two months, produced an immediate amelioration, and such restoration of power and control that the patient resumed work. One year after his cure, Dr. Rumpf exhibited the patient to the Düsseldorf Medical Society, when the only remaining symptom was absence of the tendon reflex of the knee. He has a number of cases similarly improved, but awaits the development of sufficient time to determine the reality of the cures.

So simple a procedure as brushing over the back and limbs with an electric brush may at once be resorted to by large numbers of our readers. We hope that the new expedient will be given a proper trial and the results announced.

ANALOGUES OF PTOMAINES.

WE called attention, not long since, to those peculiar substances called *ptomaines*, which have effects very similar to the alkaloids. It has lately been ascertained by Bechamp, that products having many analogies with ptomaines exist in the gastric and pancreatic digestion of many albuminoid matters. They are formed in the course of the normal digestion of these albuminoids, and are found to react with chemical agents in a similar manner to ptomaines, and to possess the same toxic activity. The importance of these discoveries, from the toxicological point of view, is certainly very great. In testing for the alkaloids in cases of poisoning, and in the experiments on animals to determine their physiological actions, the great question of the future will be, how to differentiate between them and ptomaines.

THE SIAMESE TWINS AND AN "AMERICAN SPECIAL."

IN another column we quote a highly dramatic account of the dissection of the late lamented Chang and Eng, in which an "American Special" describes how he outwitted the learned faculty present by simulating a corpse ready for dissection in the room in which the autopsy was made.

That "American Special" has the most vivid imagination we have ever known. His "big feat" is chiefly in having so delightfully misled *Chambers' Journal* and the British public.

The sober, unromantic facts are these. The College of Physicians of Philadelphia, a medical society like the Royal College of Surgeons or Physicians of Edinburgh, and not at all a college for medical students, appointed a committee to report the scientific facts as to the twins. This committee proceeded to North Carolina, and on February 1, 1874, injected the bodies with a preservative solution. Nothing else was done there. The bodies were then brought to the Hall of the College of Physicians in Philadelphia, and all the dissection was done in the room occupied by the Mütter Museum on the lower floor of the college building.

No one was present except known medical men; there were no bodies lying around on tables ready for dissection, for no dissecting-room exists there. The entire story of the lively corpse suddenly waltzing out of the door followed by the enraged doctors, and escaping in breathless but exultant haste to the railway station, is a romance made out of whole cloth.

The "special" has evidently lived by his wits and drawn upon his imagination so often and so long, that sober truth has few allurements for him. He is indeed, as he says, "one of 'em."

The report of Prof. Harrison Allen on the autopsy, and other papers and illustrations, may be found in the *Transactions of the College*, Third Series, Vol. 1, 1875, page 3, and the above facts are corroborated by his personal statements.

In an editorial on the United States Pharmacopœia in our issue of May 6, we referred to the bid of Messrs. Hall & Whiting, of Boston, as being in all respects the best offered, but was rejected by the Committee, who assumed that these bidders "were not supposed to understand their own business." In this connection it affords us pleasure to say that Messrs. Hall & Whiting are a well-known house, successors to a business of long standing, and possessed of ample energy and capital to carry out any undertaking which they would assume.

SPECIAL ARTICLE.

THE MEDICAL NEWS COMMISSION

ON THE

MANAGEMENT OF VACCINE FARMS AND ON THE PROPAGATION OF BOVINE VIRUS.

(*Continued from p. 522.*)

TRANSMISSION OF BOVINE DISEASES.

It is not only important that bovine virus be collected with care and judgment, and properly preserved, but it is equally important that it be taken from none but healthy animals. One of the principal reasons why animal virus is now being used, to the almost entire exclusion of humanized, is that it is believed to be free from the suspicion of diathetic and all other inoculable contamination. But this confidence is warranted only so long as the important duty of propagating animal lymph is intrusted to the hands of careful and intelligent physicians.

It has lately been suggested that tuberculosis might be communicated through animal virus. Bovine animals are known to suffer from the pommelière, or pearl disease, which, if not true tuberculosis, is certainly akin to it. So far as we know, there is no proof that this disease has ever been transmitted to the human subject through vaccination; the fears which have been expressed are based alone upon theoretical arguments, which have heretofore been supposed to have been confuted. But since tuberculosis has been shown to be entitled to rank among the infectious diseases, the question has assumed a far more serious aspect, showing the hypothesis to be well supported, and that the danger of transmitting the disease can no longer be rejected from among the number of possible occurrences. "But it must be noted," says Warlomont, "that the transmission of tuberculosis—excluding an immense majority of those cases which are untrustworthy—is obtained by the inoculation of the tuberculous matter itself. No one has ever, to my knowledge, anywhere spoken of transmission obtained through the serum of a tuberculous animal." We must, therefore, conclude that, if anything like reasonable care be used in selecting the animals and collecting the lymph, the danger from tuberculosis is very remote.

Malignant anthrax in cattle is of course an affection readily communicated to man by inoculation. But besides being of rare occurrence, it presents such striking characteristics in the animal, that to mistake it for cow-pox would imply almost criminal negligence on the part of the vaccinator.

Aphthæ epizooticæ, or the *foot-and-mouth disease*, is an acute infectious disorder, invariably communicated from one animal to another by contagion, and may be communicated to man by inoculation. The disease not unfrequently prevails as a widespread epidemic in Europe, but in this country, fortunately, it is not very common, though liable to be imported at any time. The official reports show that in the year 1871, 700,000 animals were attacked by this disease in England, and the same number in France. In 1869, this malady pervaded the greater portion of Europe, and, it is believed, if it were not for the strict police regulations observed in most countries of Europe, at least one-quarter of all susceptible animals would be annually attacked.

The disease is of interest in this connection, because it is frequently accompanied with a pustular exanthema upon the udder and teats of the cow, and might therefore be mistaken by a careless and inexperienced observer for spontaneous cow-pox. Again, if the disease were to occur in a heifer being used as a vaccinifer, the eruption might not only be mistaken for the spontaneous cow-pox vesicles, which are very common in a vaccinated heifer, but the two kinds of vesicles might coalesce, producing in this way contamination of the bovine virus, and thus the disease might be communicated to the human subject by vaccination. Fortunately, the affection is not very dangerous, either in the animal or in man. It would, however, prove a very annoying and undesirable complication of vaccinia, and therefore every possible care should be taken to guard against it.

It has been said that young bovine animals, of the age commonly used in this country as vaccinifers, are quite exempt from the foot-and-mouth disease. On the authority of Dr. Martin, when the disease prevailed in the cattle-market town of Brighton, Mass., in no single instance was a calf, or a heifer which had never borne a calf, attacked, although a few such animals occupied stables in which the dis-

ease existed. Bollinger, however, states that the consumption of milk of the diseased cow is in the highest degree dangerous to calves; not unfrequently from fifty to seventy-five per cent. of these animals die, chiefly in consequence of gastro-enteritis.

As showing how much less severe this affection is in the human species, even when transmitted by infected milk, the same authority says, young children only, in whom the diarrhœa assumes a grave character, become exceedingly debilitated, and now and then succumb to the disease.

In Dr. Martin's experience (up to 1877), the only animal disease, except cow-pox, which has been transmitted to man by vaccination is a cutaneous affection resembling herpes circinatus. About fifty cases of this form of disease have come under his notice, and in almost every instance the virus used had been obtained from incompetent producers. For example, a number of these cases occurred from the use of virus procured from a firm of dealers in Boston, who, utterly ignorant of everything connected with vaccination, were in the habit of buying all sorts of cheap refuse calves, keeping them in a filthy shed, and employing a medical student to perform the very important work of propagating the virus, which, with the view of misleading purchasers, was sold as "virus of Dr. Martin's stock." This fact is mentioned to show not merely how a physician might be robbed of the fruits of his labor by honorable merchants—this certainly would be shameful enough—but rather to show how animal vaccination is liable to suffer when placed in the hands of incompetent men, or degraded to the level of a commercial trade.

There is yet one point to which we may refer in connection with the subject of diseased animals as vaccinifers; it is this: any cutaneous disorder, and even diarrhœa, in the animal has been found to interfere with the most perfect development of the vaccine disease. On this point Dr. Martin remarks:[1]

"One of the first things to be learned by a vaccinator of animals, if he would achieve even moderate success, is that he cannot be too careful in the selection of his animals, not merely with a view to the avoidance of danger of communicating their diseases to human patients, but because the most trifling ailment, as diarrhœa, or even a wound or bruise, or any trifling cutaneous inflammation, or eruption, or irritation from parasitic insects or vegetations, will prevent such a development of the vesicles of cow-pox as would be profitable to the operator, and, indeed, generally any appearance, however imperfect, of the vesicle. In one instance I vaccinated most carefully, but without any effect, a fine eight-months-old heifer, whose skin was in perfect condition, but one of whose nascent horns had been accidentally broken, and had bled profusely. She was vaccinated again without success before the wound was healed; a third time, and successfully, after the injury had been entirely repaired."

Enough has been said on this topic to show that, while it is possible to inoculate into the human subject certain bovine diseases by animal vaccine, yet upon one condition such an accident can never happen, which is—"that the vaccine, whether living or preserved, be taken from a healthy animal, and collected at the required moment;" Warlomont says "this is the A B C of the whole question."

(To be continued.)

[1] Medical Times and Gazette, April 14, 1877.

REVIEWS.

A TREATISE ON AURAL SURGERY. By H. MACNAUGHTON JONES, M.D., etc. Second edition, revised and enlarged. Pp. 339. Philadelphia: P. Blakiston, 1882.

THE second edition of this work is far superior to the first, and presents, in a concise form, a large number of facts of value to the general practitioner and student beginning otological work. In his generosity towards his *confrères*, the author has alluded to and presented pictures of some very worthless instruments, such as the obsolete curved catheter of Noyes, the koniantron of Weber-Liel, and also numerous forms of tenotomes for operating on the tensor tympani muscle, tenotomy of this muscle being now considered a reprehensible operation. He also presents numerous wood-cuts of the worse than useless, because harmful, artificial membrana tympani of wire and sheet rubber, from that of Toynbee down to the latest worthless form. However, allusion is made to the very useful cotton pellet of Yearsley and its valuable modifications. This form of artificial drum is not only the only efficient one, but the only safe—*i. e.*, non-irritant, one. We think the author is unfortunate in his selection of polyp-snares, none of which are comparable in efficiency with Blake's-Wilde's snare, and its modifications by Sexton and C. H. Burnett. All of those the author presents are invented on *à priori* grounds, and we defy any one to operate either successfully or painlessly with them; in fact, they are usually too large to enter the ear. It will be a fortunate day for surgical science when there shall be no more instruments invented on *à priori* grounds, but still more fortunate shall be the era when authors cease to copy into their books pictures of, or even allude to, such instruments. The author of this treatise would make a third edition of his book of still greater value than this if he would weed out the useless instruments he alludes to, because even their inventors have, in many cases, abandoned the use of them. He unfortunately makes a mistake in attributing Blake's experiments with Koenig's rods (p. 30) to another observer. In this way the book fails to be what it and all treatises should be—a guide in the history of the development and growth of the subject of which it treats. However, it is, in many ways, an interesting and instructive work, and our only wish is to point out how it can be made still more so.

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Thirty-third Annual Session, held at Titusville, May 10, 11, and 12, 1882.

(Specially reported for THE MEDICAL NEWS.)

FIRST DAY, WEDNESDAY, MAY 10TH. The Society met at 10 A.M.

DR. J. L. ZIEGLER, of Lancaster, President, in the chair.

Prayer was offered by Rev. J. A. Marshall.

DR. GEO. O. MOODY, of Titusville, made an *Address of Welcome* on behalf of the profession and citizens.

After the adoption of the programme, it was agreed that each County delegation should select its member of the Committee on Nominations immediately after the morning session.

THE CODE OF ETHICS.

DR. HENRY H. SMITH, of Philadelphia, offered the following:

Resolved, That this Society *reaffirms* its adhesion to the Code of Ethics as adopted by the American Medical Association.

Resolved, That the delegates of this Society to the meeting of the American Medical Association, in 1882, be instructed to *enter an early protest* against the admission to the Association of the delegates of any State or other society that objects to and does not observe said Code of Ethics in all its recommendations.

After remarks by many of the most prominent members in favor of this action, the Secretary read a similar resolution passed by the Philadelphia County Medical Society, and, the vote being taken, the resolution was *unanimously* adopted.

On motion of Dr. Smith, the Secretary was instructed to forward to the Chairman of the Committee of Arrangements of the American Medical Association a copy of this minute.

A request from the Ladies' Temperance Union was laid on the table.

An invitation to visit Warren Insane Asylum was declined for want of time.

An amendment to the Rules of Order was offered, and laid over for one year.

The Committee on a State Board of Health reported a further delay of the Legislature in the necessary action, and the Committee was continued, with instructions to press upon the Legislature the importance of the subject.

The Association reassembled at 2 P.M.

THE AMENDMENT TO THE CONSTITUTION,

offered last session by Dr. R. S. Sutton, of Pittsburg, was considered—

Sec. 2, Art. III., to read, "Every member of a county medical society in Pennsylvania shall, so long as he is in good standing, be a member of the State Medical Society, and a delegate to its annual session."

After some remarks, the amendment was rejected.

THE ADDRESS IN OBSTETRICS,

by DR. R. S. SUTTON, was read by Dr. Daly. The subject was "Abdominal and Pelvic Surgery on the Continent of Europe."

DR. S. S. SCHULTZ, of Danville, read a paper on *Gheel*, or the insane colony of that locality, detailing his observations at that place, the Mecca of Alienists. It is in the northern part of Belgium, and a part of the province of Antwerp, and includes a number of farms. Nearly all the inhabitants are engaged in lace-making, or in the care of the insane. The place is said to have originated in the year A.D. 600, a romantic story giving the details as the result of a tragedy in that year. A grave of a saint who was then slaughtered became the attraction of those who were to be cured of insanity by a visit. Hence, buildings became necessary for the reception of these guests, caretakers, appropriate nurses, etc. By degrees, as changes occurred, a process of evolution resulted, and the government took charge, so as to require it to be inspected. The patients are supposed to be divided as to their condition, but this is not fully carried out. Wealth procures the best care, and poverty allows the patient to live in a hut, with a mud floor, and with the imperfect care of a mechanic as a nurse. In no way could the Gheel system be appropriate for this country. Its success is largely due to its permanent residents, life-long nurses. It is not in any way family treatment.

DR. J. V. SHOEMAKER, of Philadelphia, then read a paper on the

OLEATES AND OLEOPALMITATES IN SKIN DISEASES,

and spoke of the great value that they possess over the *ordinary* ointments in general use.

Oleate of zinc is, *par excellence*, the remedy for excessive sweating, or in cases of hyperidrosis and osmidrosis. He has been using it for more than a year, dusted over the surface of patients suffering from an increased flow of sweat about the palmar and plantar surfaces and around the axillæ and genitalia. It has relieved and permanently cured some of the most distressing cases of excessive secretion about the feet, in which the epidermis had macerated and peeled away, leaving a tender and exposed skin, and giving rise to a very disagreable odor. It is most valuable in eczema vesiculosum.

The most successful results that he has as yet had with oleate of copper, have been in rapidly curing cases of ringworm.

Oleate of aluminium has the most decided action of all the oleates in checking muco-purulent discharges that occur in one of the varieties of eczema. It can also be employed with success as a dressing in foul ulcers, abscesses, sinuses, burns, and scalds, from its power to coagulate albumen, constringe the vessels by its antistyptic action, and check or correct the secretion of muco-pus.

Oleate of iron is free from local irritation when used topically, but when brought in contact with an ulcerating surface it has a very mild astringent action. It can therefore be used both for a constitutional and local effect.

Oleate of arsenic is a soft, yellowish ointment, having no change on the skin, except when abraded or in wounds, ulcerating and granulating surfaces, in which condition it will excite active inflammation and destroy the tissue of the parts to some depth. In lupus, especially the ulcerating varieties, the constant application of the ointment of arsenious oleate will destroy cell infiltration in a mild and comparatively painless manner. It may be employed with almost as good result in the tubercular form of lupus, providing the parts be thoroughly scraped, so as to bring the oleate in contact with an abraded surface which will greatly enhance its action. It can be used very satisfactorily in the ulcerating variety of epithelioma, and will be better borne for a longer period to the parts than any other form of arsenic.

Oleate of silver sprinkled over old chronic ulcers, bedsores, and exuberant granulations, will set up a healthier state of the parts. It is a safe and efficacious remedy in erysipelas, and can be used either around the margins to prevent the inflammation from extending, or can be applied weak, ten to twenty grains to one ounce of lard, over the inflamed surface. It has reduced the active inflammation by being constantly applied in several cases of the superficial variety of lupus. It will be serviceable applied to boils and carbuncles, and may often arrest pustulation in its early stages. An intolerable itching that sometimes occurs around the meatus auditorius, the anus, and the genitalia may often be quickly relieved by applying this ointment, either alone or combined with opium or belladonna. The advantages that the ointment of the oleate of silver possesses over the ordinary silver ointments are: its stability and prompt action, and its being less painful, and milder in its curative manner, but still penetrating deeper into the affected parts.

The superior advantages which the oleates possess

over the ordinary ointments were considered under the following five heads:

First. Their deep penetration. The oleic acid in their combination gives them active solvent powers, and facility and ability to penetrate rapidly into animal textures, while rendering any chemical ingredient with which it is combined more active and effective in dermic medication.

Secondly. Their freedom from rancidity. The same acid held in the combination will always keep the fat, with which the oleate is mixed, pure, sweet, and free from rancidity.

Thirdly. Their cleanliness of application. The rapid absorption of the oleate into the tissue will prevent any unpleasant disfigurement of the parts, will not stain the linen, and will give comfort and ease in their application.

Fourthly. Their great economy. The oleate should not be rubbed in vigorously like the ordinary mechanical ointments, which require considerable friction; they only require to be lightly smeared or applied over the surface in very small quantities, hence their great economy.

Fifthly. Their antiseptic action. The oleic acid in combination has also a most happy and effective action in rendering the oleates antiseptic and deodorant upon all discharges and suppurating surfaces.

A great drawback, however, to the general adoption of the oleates will be the lack of knowledge that the majority of pharmaceutical chemists have at the present time of their manufacture.

DR. TRAILL GREEN, of Easton, read a paper entitled *Medicine and Something More.*

DR. E. E. MONTGOMERY, of Philadelphia, read a paper entitled,

PROCIDENTIA AND ITS RELIEF,

in which, after reviewing the opinion of authorities upon the true uterine support, he assumed that the vagina was the support in the normal condition, and the ligaments nature's reserve forces. Prolapse occurs as a result of three conditions: 1st, pressure from above; 2d, increased weight of the uterus; and 3d, want of support below. The most potent agents in its production are engorgement of the uterus, frequent labor, laborious exercise, early resumption of domestic duties, neglect of laceration of perineum, and the frequent use of a widely expanding bivalve speculum.

There are three stages: 1st, simple descent; 2d, incomplete prolapse; and 3d, complete prolapse or procidentia.

The earlier symptoms are pain in back and limbs, bearing down, burning pain in pelvis and groins, and sensation of pressure upon fundament, followed later by vesical and rectal distress and tumor at the vulva.

Procidentia is distressing from friction against clothing and limbs, and from being bathed with urine, the womb often becomes ulcerated. The indications for treatment are, 1st, to replace the uterus, and, 2d, prevent the recurrence of the disorder. The latter comprises mechanical and surgical measures. The mechanical support is by means of pessaries, which are unpleasant, ineffective, and not without danger. In reviewing the various surgical procedures proposed, he claims that they all, with the exception of Le Fort's, fail to give permanent relief, for two reasons: 1st, they do not elevate the uterus to its normal position and thus facilitate the absorption of hypertrophy, and the atrophy which should occur with age; 2d, they do not afford sufficient support in the upper third of the vagina, allow the enlarged organ to sink like a wedge into the narrowed canal, and by pressure cause the absorption of the tissue below until it is again outside.

These causes of failure are obviated by Le Fort's operation, which, by constructing a bridge of tissue in the centre of the vagina, supports the uterus. It forms a double vagina. Tracy greatly improved the operation by restoring the perineum at the same time. The only drawback to its invariable performance is that the adhesion of the vaginal walls would greatly complicate delivery.

He gave notes of a case in which the operation was performed, and was completely successful.

DR. JOHN G. LEE, of Philadelphia, read a paper on *Criminal Homicides in the City of Philadelphia during a Decade; together with the Moral and Medico-legal Duties of Practitioners of Medicine in Murder Cases.*"

No further back than 1836, a distinguished European scientist and statistician made the statement that: "Man is born, grows up, and dies according to certain laws, which have never been properly investigated, either as a whole, or in the mode of their mutual reactions." Such a criticism applied nowadays to the advance of medical knowledge would be neither true nor just. For no branch of science has advanced more rapidly. And, among the many facts which have been attentively observed, especially has the cessation of the organic and material life of individuals of the human race been considered a phenomenon of exceeding interest; though but little work has been done concerning the mode of death, to which this paper calls attention.

From December 31, 1871, until January 1, 1882, out of a total number of 12,936 cases of death investigated by the Coroner's office in Philadelphia, 323 cases were deaths from homicidal violence. The year 1876 showing 46 to 23 occurring in 1873, the average being 32.3. Of the 323 cases, 26 were colored people and 297 whites. As might be expected, we find deaths from criminal violence occurring more frequently at the period of life when the bodies and intellects of the human species being fully matured, their passions are most difficult to control, the highest number being reached between the ages of 20 to 30, the next highest between 30 to 40, and then between 40 to 50; the lowest mortality being between 80 and 90, and from 5 to 15 years. 262 were adults, and 61 were minors; 174 were married, and the remaining 136 single.

These deaths occurred from the following causes: violence, blows, kicks, and other injuries, 126 cases; gunshot wounds, 66; knife wounds, 53; criminal abortion, 32; poison, 18; miscellaneous causes, 28.

Massed in groups of months, the greater number of homicides occurred in July, and the least in March. As a rule the majority of criminal killings occurred during the warm months of the year. While general meteorological phenomena most undoubtedly exert a certain influence over the frequent taking of human life, what their special effects are we are not now able to determine. Though, admitting that the impulsive actions excited by human passions are not subject to special rules and laws, we cannot but define them as being in themselves the physiological manifestation of certain physical phenomena exerting a disturbing influence over cerebral action.

WEDNESDAY EVENING.—The Society assembled at the Academy of Music, Vice-President J. A. Reed, M.D., of Dixmont, in the chair.

The PRESIDENT, DR. J. L. ZIEGLER, of Lancaster, delivered the

ANNUAL ADDRESS,

the subject of which was *The Equality of the Sexes.*

On motion of Dr. J. L. Stewart, of Erie, the thanks of the Society were tendered to Dr. Ziegler, and a copy of the Address was requested for publication.

SECOND DAY, MAY 11TH.—THURSDAY.

The session was opened at 9 A.M. with prayer.

The names of the Committee on Nominations were announced by the Secretary.

The reports from County Medical Societies were received and referred to the Committee on Publication.

The TREASURER, DR. BENJAMIN LEE, of Philadelphia, reported the receipts and expenditures during the year, and a balance of over $1,900 in the treasury.

DR. CHARLES S. TURNBULL, on behalf of Dr. L. Turnbull, of Philadelphia, read the report of the

COMMITTEE ON DEFECTIVE HEARING OF LOCOMOTIVE ENGINEERS, ETC.,

giving the method of investigation, and announcing that the Pennsylvania Railroad Company had adopted their plan set forth. Of two thousand examinations, reports are given in detail, showing their value and importance.

THE ADDRESS ON MENTAL DISORDERS,

by DR. CHAS. K. MILLS, of Philadelphia, embraced a discussion of the nature of crime and its relations to insanity, the mooted points in the question of responsibility in criminal cases, the necessity of modifications in our lunacy laws, and the importance of providing special asylums for criminal lunatics. Criminals should be studied, not in mass, but as individuals. They can be distinctly classified. Crime and insanity are related, but crime is not always a form of insanity. A knowledge of right and wrong, and even the presence or absence of delusions, cannot always be made the tests of responsibility. Responsibility must be measured in doubtful cases by the power of control.

The case of Guiteau was extensively used by Dr. Mills to illustrate his points. He regarded Guiteau as insane—the assassin's family history, his life from the time he entered the Oneida Community, the probable presence of delusions when he shot the President, and his conduct during and since the trial—supplying ample evidences of insanity and insane tendencies.

The trial of Guiteau was not conducted on scientific principles. A commission of experts should have been appointed to determine his alleged insanity, instead of using testimony in a partisan manner.

It may sometimes be advisable to punish the insane, but the greatest judgment should here be exercised. Capital punishment in the case of the insane can never be justified. In case of homicidal insanity, imprisonment for a definite term of years, or for life, in a criminal lunatic asylum would better serve the ends both of justice and mercy.

Our laws with reference to the confinement in asylums of criminals acquitted on the ground of insanity, should be modified, so as to better meet the requirements of justice in special cases.

Better provision should be made for the protection of the sane from the insane, from the many cranks and lunatics that are abroad in the land.

The founding of special criminal lunatic asylums in Pennsylvania and elsewhere was advocated by Dr. Mills in concluding his address.

By request, a paper, by DR. A. T. LIVINGSTON, of Philadelphia, was read in lieu of the discussion of Dr. Mills's address. It was entitled, *Suggestions Regarding Legislation for the Benefit and Protection of the Insane.*

DR. W. H. DALY, of Pittsburg, read a paper entitled *Some Questions Relating to Tonsillotomy.* He exhibited the instruments generally employed, and his own modifications of them. He spoke of the necessity for this operation, and the evil results following its omission. He alluded to the belief as to non-virility after removal of the tonsils, and adduced several cases where procreation had followed.

DR. A. HEWSON, of Philadelphia, also mentioned several cases where children had been born to parents after the operation, and in one case both parents had been operated upon.

DR. J. L. ATLEE, of Lancaster, spoke of the old method by ligature and canula, and of the origin of the Fahnestock instrument, he having suggested it to Dr. Fahnestock, who shortly afterwards embodied the ideas in an invention, but unfortunately took out a patent for it. Dr. Atlee had the original instrument, and had removed an immense number of tonsils with it. Concerning virility, he had two children, both operated upon, and both with eleven children.

DR. HENRY H. SMITH, of Philadelphia, deprecated the fear of hemorrhage. A little cold water speedily stopped the flow. To cut the carotid you must go through the side of the pharynx, which was not likely, unless by the use of an objectionable instrument. But a small portion need be removed.

DR. TRAILL GREEN, of Easton, spoke of the impairment of hearing after the operation.

DR. WM. S. LITTLE said that among the numerous general symptoms associated with hypertrophy of the tonsils, Dr. Daly spoke of drooping of the eyelids. He would like to inquire how frequently this is present, whether restricted to the upper eyelid or lower? Is the cause due to reflex irritation or to inflammation of the conjunctival sac from inflammation reaching it through the lachrymal passages? The stupid expression of face and appearance of lack of interest is more likely to be due to some optical defect.

DR. J. A. LIPPINCOTT, of Pittsburg, read a paper entitled *Abscess of the Orbit;* after presenting hospital statistics showing the extreme infrequency of the disease, he went on to treat in detail of the symptoms, etiology, differential diagnosis, and treatment of this formidable affection.

DR. C. K. MILLS thought the elevation of the temperature of the locality would be an aid in the diagnosis.

DR. CHAS. S. TURNBULL, of Philadelphia, read a paper entitled *Powdered Boracic Acid in the Treatment of Chronic Purulent Inflammation of the Middle Ear.*

DR. EDW. J. JACKSON, of West Chester, read a paper entitled *A Comparative Study of the Action of Certain Mydriatic Alkaloids.*

DR. JOSEPH HEARN, of Philadelphia, read a paper entitled

NATURE AND TREATMENT OF RODENT ULCERS.

The object of this paper was to call the attention of the general practitioner to the early recognition and proper treatment of this affection, and thus prevent those cases of frightful disfigurement which often present themselves too late for relief.

This disease is a local cancer. It begins as a nodule, and is often engrafted on a preëxisting mole, wart, or cicatrix. The nodule becomes fissured, and an open ulcer forms. It enlarges by increase or extension of the nodule at the edge of the ulcer. It generally occurs in old age, though occasionally it is found upon young persons. The diagnosis, as a rule, is not hard. It is recognized from lupus by the fact that lupus generally occurs in young adults, is a strumous disease, often attacks two or more points of the body at the same time, and often heals under internal treatment. Rodent cancer possesses none of these characteristics. Syphilitic ulcers run their course rapidly, and are devoid of hardened edges. The treatment is complete removal of the ulcer-base, of the hardened margins as well as the adjoining healthy structures. The structures of the face, where it generally occurs, repair so rapidly, after the most extensive removal of the parts, that the most hopeless cases may be often cured. When the knife is used and cannot reach every portion of the diseased tissue, the caustic may be made to assist.

For the ordinary small rodent cancer he prefers to use

the stick of caustic potash, entirely destroying the base and hardened edges. The after-dressing consists in the application of carbolized oil. For very superficial ulcers of the forehead or nose, there are no caustics superior to sodium ethylate or fluoric acid. They do not attack the healthy structures, only the diseased cells, no after-applications being necessary. When the crust which forms from the application falls, the tissues beneath are generally found to be entirely healed.

THURSDAY AFTERNOON.

THE NOMINATING COMMITTEE

reported as follows:—*President*, Wm. Varian, M.D., of Titusville. *Vice-Presidents*, Dr. Addinell Hewson, of Philadelphia; Dr. E. P. Allen, of Athens; Dr. A. Thayer, of Erie; Dr. A. M. Miller, of Bird-in-Hand. *Permanent Secretary*, Dr. Wm. B. Atkinson, of Philadelphia. *Assistant Secretary*, Dr. Edward J. Jackson, of West Chester. *Corresponding Secretary*, Dr. John G. Lee, of Philadelphia. *Treasurer*, Dr. Benjamin Lee, of Philadelphia.

The report was unanimously adopted.

MISCELLANEOUS BUSINESS.

On motion of Dr. J. L. STEWART, of Erie, it was

Resolved, That each County Medical Society be instructed to report with its list of members, the place and date of graduation, or other requirements for practice, of each as registered under the action of the new law.

On motion of DR. BENJAMIN LEE, of Philadelphia, it was

Resolved, That a committee of three be appointed to memorialize the legislature of this State with reference to amending and codifying the lunacy laws now on our statute books.

The committee was appointed as follows: Dr. B. Lee, chairman; Joseph A. Reed, of Dixmont, and S. S. Shultz, of Danville.

On behalf of DR. ALFRED L. KENNEDY, of Philadelphia, the Permanent Secretary read the following:

Whereas, The House of Representatives at Washington has asked the U. S. Commissioner of Agriculture for information "whether any portion of the United States is adapted to the growth of the Cinchona tree," and

Whereas, Should the same be practicable, the introduction of the tree, and its cultivation as a native source of quinia, and the other active principles of the bark, are demanded by the highest consideration of public policy, therefore

Resolved, That the Medical Society of the State of Pennsylvania hails with satisfaction the adoption of measures designed to ascertain the capability of the United States to produce the Cinchona, and calls upon the National Department of Agriculture to present at an early day the information asked for by the House of Representatives.

Resolved, That the delegates of this Society to the American Medical Association be and they are hereby instructed to lay the above preamble and resolution before that body at its next session, and if in the opinion of the delegates it be desirable, then to request similar action on the part of the Association.

On motion, the preamble and resolutions were adopted.

The Committee of Publication presented a report showing the publication and distribution of fifteen hundred copies of the Transactions.

DR. W. F. MUHLENBERG, of Reading, read the *Address in Hygiene*. His subject was *Germs*.

The schedule of subjects, etc., for examination of students was called up. An amendment or minority report was offered by Dr. Finley, and after discussion, on motion of Dr. J. L. Atlee, the whole matter was referred to the committee for further report.

DR. W. S. LITTLE, of Philadelphia, read a paper on *Sympathetic Traumatism of the Eye*.

A paper on *Treatment of Membranous Croup*, by DR. W. B. ULRICH, of Chester, was read by title and similarly referred.

DR. HENRY LEFFMAN, of Philadelphia, read a paper, entitled *Medical Relation of Prevailing Adulterations*. He specially referred to glucose as not being a dangerous article, whether in food or liquors. Oleomargarine also was not really objectionable. The insertion of talc, etc., in flour, etc., he believed to be a newspaper sensation. Candy-coloring was not so common as formerly and rarely dangerous. He did not think any legislation was required.

DR. B. E. MOSSMAN, of Greenville, read a paper entitled

PUERPERAL MALARIAL FEVER.

The attention of medical men who reside in malarial regions has of late years been directed to the subject of the influence of malarial or telluric poisoning upon the lying-in woman. The result of careful clinical investigations has been to secure abundant testimony which goes to prove that during that period the poison will develop itself with such symptoms and conditions as to justify the conclusion that malarial fever is one of the diseases incidental to child-bed, particularly in localities where malarial diseases prevail. Although the term "puerperal malarial fever" is not included in medical nomenclature, it was in his opinion an appropriate one, and as time passes, and the disease is better understood, it will meet with recognition by practitioners and occupy a place in the medical literature of the progressive future. The views which he expressed upon the subject were derived all from his own study and observation, during an experience of over eighteen years' practice in a highly malarial region, during which time he had treated many cases. There is no literature on it, save a paper by Barker.

The *diagnosis* between puerperal fever and this is not easy. It commences about the sixth day or even later. The symptoms are those incident to an attack of malarial fever, and are characterized by remissions at regular periods and high temperature during the exacerbation. There is almost always severe pain at the hypogastrium, the limbs are drawn up, and the weight of the bed-clothes cannot be borne.

Its true nature is shown by a fall of temperature, decline of other symptoms, moisture of the skin, and a recurrence in the temperature.

The treatment is quinia in fifteen to twenty grains, as soon as a fall of temperature is observed, combined with opium if necessary, and continued in smaller doses for several weeks.

DR. CARL SEILER, of Philadelphia, read a paper entitled *Intra-nasal Surgery*, detailing the method of treating growths, as polypi, etc., and describing his instruments and a new electrical engine.

DR. ADDINELL HEWSON, of Philadelphia, made some remarks on *Paper as a Vehicle for Preserving Soap for Surgical Purposes*. He exhibited specimens prepared in Titusville.

After some minor matters, the Judicial Council presented a report on a case, and a suggestion as to the registration of foreign diplomas under the new law.

DR. R. L. SIBBET, of Carlisle, presented a report of the results of the Registration Law, as shown by the reports of the Prothonotaries of the various counties.

The report was accepted and the suggestions were recommended to the County Societies.

THIRD DAY, MAY 12TH.—FRIDAY.

DR. J. V. SHOEMAKER, of Philadelphia, offered the following resolutions, which were unanimously adopted:

Resolved, That the thanks of the Medical Society of the State of Pennsylvania, are hereby tendered to the members of the Committee of Arrangements, the Ministers who opened our sessions with prayer, all of whom, though surrounded by the marks of a recent adversity, have succeeded in making us comfortable during our stay, and have added largely to make the sessions pleasant, harmonious, and interesting.

Resolved, That we tender our heartfelt thanks to his Honor, the Mayor, James H. Caldwell, and his good lady, Dr. and Mrs. Wm. Varian, and Dr. and Mrs. Geo. O. Moody, for the elegant and enjoyable receptions given at their homes.

Resolved, That we desire to express our deep gratitude and high appreciation to the citizens of Titusville, and particularly to the ladies, for the hospitable manner in which they have received the members and their families.

Resolved, That we extend our thanks for courtesies to the members of the Oil Exchange, the Battery Armory, the Daily Herald of Titusville, and the Philadelphia Public Ledger.

Resolved, That we tender our thanks to the President and Officers, for their valuable services during the session.

DR. E. GRISWOLD, of Sharon, read a paper entitled *Herniotomy, with a few Cases*, showing the importance of an early operation.

A paper on *Excision of Cartilage in Nasal Occlusion due to Deviated Septum* was read by DR. J. B. ROBERTS, of Philadelphia. (See MEDICAL NEWS, March 18, 1882.)

DR. WM. VARIAN, of Titusville, read a paper entitled *A Case of Ovariotomy*, showing the presence of a fibroid in the ovary, an extremely rare form of disease.

The paper was discussed by DR. A. HEWSON, of Philadelphia, who alluded to the treatment by dry earth. By this method, in many cases which were abandoned by operators on account of the numerous adhesions, he had succeeded in producing the degeneration of the tumor, its diminution, and a final cure. In from three to five weeks, he looks for favorable results.

The report of the delegates to the Massachusetts Medical Society was received and referred.

As the members were rapidly leaving the Hall on account of the cold, on motion of DR. VARIAN, it was agreed that the remaining papers should be read by title, in order that the Society might adjourn.

These were so read, and referred to the Committee of Publication.

The President appointed the following:

To prepare the *Address in Surgery*, DR. A. CRAIG, of Columbia; *in Obstetrics*, DR. G. O. MOODY, of Titusville; *in Hygiene*, DR. HENRY LEFFMANN, of Philadelphia; *in Mental Disorders*, DR. JOHN CURWEN, of Warren; *in Medicine*, DR. JAMES TYSON, of Philadelphia.

The PRESIDENT-ELECT, DR. WM. VARIAN, was then escorted to the chair, and after some remarks, he declared the Society adjourned to meet at Norristown, on the second Wednesday of May, 1883.

INDIANA STATE MEDICAL SOCIETY.

Thirty-second Annual Meeting, held at Indianapolis, May 9, 10, and 11, 1882.

(Specially reported for THE MEDICAL NEWS.)

MAY 9TH.—FIRST DAY.

THE Society was called to order at 10.30 o'clock by the PRESIDENT, DR. MARSHALL SEXTON, of Rushville, and the Divine blessing was eloquently invoked by Rev. J. K. Pye.

A COMMITTEE ON CREDENTIALS was appointed, consisting of Drs. Hobbs, of Knightstown; Wood, of Angola; Boyd, of Dublin; Matthews, of Madison; and Pearce, of Mount Vernon.

The Committee of Arrangements reported an expenditure for the meeting of $159.

The following Finance Committee was appointed: Drs. Dare, of Parke County; Thompson, of Marion; Halzenburg and Spurrice, of Rush; and Ford, of Wabash.

THE SECRETARY'S REPORT.

DR. E. S. ELDER, the Secretary, made his annual report, which showed that $1,101 in dues had been collected, of which $163 were delinquent. The present membership of the Society is 1,083, an increase of 11 since the last report. There have been 253 accessions during the year, 89 removals, 85 suspensions, 54 withdrawals, and 7 deaths. The large number of removals and withdrawals, the Secretary thought, was the result of the last year's law of the Society, regarding membership outside the limits of the counties in which local societies were in operation, and he thought the increase in membership showed that the original plan of incorporation was best adapted to the results desired.

THE TREASURER'S REPORT.

The Treasurer, DR. G. W. H. KEMPER, of Muncie, submitted his annual report, which made the following showing: Receipts, $1,651.95; expenditures, $1,301.54; balance on hand, $350.41.

DR. JAMES F. HIBBARD, of Richmond, read a paper on *Bacteria;* DR. G. W. H. KEMPER, of Muncie, a paper on *Primary Cancer of the Lungs;* DR. JOSEPH IUTZI, of Richmond, one on *Heredity and its Relations to the Causation of Disease;* DR. ALBERT G. PRESTON, of Greencastle, a report of a case of *Complete Transverse Rupture of the Vagina;* and DR. WILLIAM LOMAX, of Marion, a *Report of a Case of Delivery by Embryotomy without Cutting Instruments.*

THE COMMITTEE ON ETHICS

reported on the case of Dr. Vinnedge, of Lafayette, which had been appealed from the Tippecanoe County Society. They found that he had been guilty only of indiscretion, and that the charges preferred by the local society had not been sustained, and recommended that they be withdrawn, and that Dr. Vinnedge apologize to the Society. The report was concurred in.

THE FINANCE COMMITTEE

reported an examination of the reports of the Secretary, the Committee on Publication, and the Treasurer, and recommended that the Secretary be paid $100, the Chairman of the Committee on Publication $50, and the Treasurer $25. The report was adopted.

DR. F. J. VAN VORHIS offered as an amendment that the Chairman of the Committee on Arrangements be allowed $25 for his services, which amendment was approved by the Association.

MAY 10TH.—SECOND DAY.

The Committee on Nominations, consisting of one member from each county, was appointed.

The following

COMMITTEE REPORTS

were presented:

The Committee appointed last year to arrange for the preservation of the Society records presented their report, which recommended the abolition of the office of Librarian, thereby throwing his duties upon the Secretary. The report was adopted.

The Committee on Ethics, to which had been referred matters pertaining to the quarrel between Dr. Hibberd and Dr. Van Vorhis, reported that there had been no

violation of the Code on the part of either gentleman, and recommended that the papers in the case be laid on the table, which was agreed to.

On motion of DR. KEMPER, the Chairman of the Publication Committee was instructed to prepare and publish in the transactions for 1882 an alphabetical index of all papers heretofore published in the several volumes of transactions, and also an alphabetical index of names of members who have contributed papers, with their title and date.

DR. W. H. BELL, of Logansport, read an able paper on *The Management of Stillborn Children After Resuscitation*, which was discussed at length by Drs. Waterman, Beard, Porter, Moffett, and Haughton.

DR. J. R. WEIST, of Richmond, followed with a paper on *Hot Water in Surgical Practice*.

DR. J. A. AXTIN presented a paper on *Diphtheria*, which was referred to the committee on publication, without reading.

AFTERNOON SESSION.

The Wayne County Society offered a resolution asking the American Medical Association to use its influence with the National Board of Health to take charge of the cultivation of vaccine virus.

The following

OFFICERS FOR THE NEXT YEAR

were named by the Committee on Nominations, and were accepted by the adoption of the report: *President*, W. H. Bell, of Logansport; *Vice-President*, S. H. Charlton, of Seymour; *Secretary*, E. S. Elder, of Indianapolis; *Assistant Secretary*, G. W. Burton, of Mitchell; *Treasurer*, G. H. Kemper, of Muncie.

DR. THAD. M. STEVENS then read the report of the committee appointed last session to draft a bill regulating the practice of medicine, and the consideration of this report was made the special order for the evening session after the president's address.

DR. N. FIELD, of Jeffersonville, read an interesting paper on *Etiology of Endemic Fever*.

DR. MARY F. THOMAS, of Richmond, submitted a report of the Committee on *Women Physicians in the Hospital for Insane Women*.

After Dr. C. D. Pearson's paper on *Eclampsia* had been read, the Association adjourned until evening.

EVENING SESSION.

DR. SUTTON offered a resolution instructing the Secretary to procure copies of the volumes of transactions of former meetings of the Society, and have them bound in one volume.

DR. KITCHEN offered the use of his volumes, as he believed they were scarce, for which a vote of thanks was tendered the donor.

The special order was

THE PRESIDENT'S ADDRESS.

DR. SEXTON chose for his subject *Boards of Health, Medical Legislation, and the Rights and Duties of Physicians under the Law*. In speaking of the profession, he said: Your work, numbers, and intelligence constitute you the conservators of the public weal. You have done a great work in securing the establishment of a State Board of Health, which promises to do very much good. Unfortunately the chosing of the members of the Board got into the domain of politics instead of science. But I want to congratulate you and Governor Porter upon the wisdom he has shown in the selection of men who are so eminently qualified for the positions they fill. As far as the work of this Board is considered, the minority might be composed of laymen, for they would not impair the efficiency of the organization. A majority of the Board is made up of physicians of the regular school, and to a certain extent, therefore, you will be held responsible for its success or failure. Health laws have been promulgated and enforced by the Board, and have done much to prevent the spread of disease. The question has often been asked what authority had the Board to make the use of bovine virus compulsory in vaccination. The authority is undoubted, but the wisdom of such a policy can well be questioned. My personal opinion is, however, that bovine virus is much more dangerous than human virus, and I trust that when the Board shall have heard the experience of old practitioners, it will rescind the order. Another order of the Board, to isolate every case of scarlet fever, diphtheria, etc., would be received with the greatest satisfaction, and would do incalculable good.

He then deprecated the common use of spirituous liquors, and urged the enactment of a strong temperance law. He also advocated the passage of a law regulating the practice of medicine.

THE CODE OF ETHICS.

DR. T. B. HARVEY offered the following resolution:

Resolved, That the spirit which pervades the Code of Ethics, in regard to professional intercourse with irregular physicians, is violated as much by recognizing them as physicians in official capacities as by conferring with them at the bedside, and therefore the denunciation of one is equally applicable to the other

After some discussion, it was laid upon the table.

MAY 11TH.—THIRD DAY.

DR. H. D. ANERINGER, of Fort Wayne, described an interesting case of *Lacerated Perineum*, which was discussed at length.

THE STATE BOARD OF HEALTH.

The following resolution, offered by DR. VAN VORHIS, was adopted:

Resolved, That a law creating a State Board of Health having, after many years of persistent effort on the part of this Society, and of the medical profession of the State of Indiana, been enacted, it is now, in our opinion, the duty of every member of the profession and fraternity of this Society to, in every right and proper way, aid in making successful the accomplishment of the highest possibilities under it; laying aside all personal preferences and differences, and uniting as one man in assisting the Board in the grand and noble purpose of preventing disease, alleviating human suffering, and saving human life.

THE NEW YORK CODE.

A series of resolutions from the Societies of Bartholomew, Fountain, Noble, and other Counties were presented, asking a condemnation of the action of the New York Medical Society, in adopting a new code of ethics, by which the regular physicians might meet and consult with representatives of other schools who were legally qualified, such action being characterized as useless, unauthorized, imprudent, and injurious. The resolutions were adopted as the sense of the State Society.

The following papers were read: *The Relation of Nerve to Muscle*, by DR. HAUGHTON; *Epidemic Cerebro-Spinal Meningitis*, by R. F. STONE, M.D., of Indianapolis, Ind.; *Glances at and Observations upon Some Health Resorts in the United States west of the 100th Meridian*, by E. S. ELDER, M.D., of Indianapolis, Ind.; *Regular Physicians and Practitioners*, by J. S. MCMURRAY, M.D., of Frankfort, Ind.

AFTERNOON SESSION.

Papers were read by DR. PORTER on the *Treatment of Fracture of the Clavicle;* by Dr. J. W. Compton, of Evansville, on *Animal Virus;* and a paper on *Ovariotomy*, from the Tipton County Medical Society.

PUNISHMENT OF ABORTION.

A series of resolution were presented by the Noble County Society, asking the State Association to petition the next Legislature to make certain designated amendments to the Public Offence Act, so as to provide more adequate punishment for procuring abortions.

DR. FRINK, in moving the adoption of the resolutions, said that few persons had an idea of the infamous practices of pretended doctors who were coming into the northern part of the State from Illinois and Michigan. Abortion was openly and freely practised, and he knew of one man who visited a certain town in his locality semi-monthly, and who each time took the lives of at least six human beings. Something should be done at once in this matter.

DR. VAN VORHIS said he was in favor of some action in the matter, but he did not like the Society to go on the record in favor of allowing immunity from punishment to that *particeps criminis* who would testify against the person who would perform the operation.

A physician from Fort Wayne said it would not do to refer this matter altogether to the Legislature, for at the present time a member of that body from Allen County was on trial for procuring an abortion.

The resolutions were lost.

DR. BELL, of Logansport, the newly-elected President of the State Association, was formally introduced and returned thanks for the honor.

A vote of thanks was given Dr. Sexton, the retiring President, and the Association then adjourned.

TEXAS STATE MEDICAL ASSOCIATION.

Fourteenth Annual Session, held at Fort Worth, Texas, April 25, 26, and 27, 1882.

(Specially reported for THE MEDICAL NEWS.)

THE Association convened at 10.30 A. M., April 25th, Vice-President S. F. STARLEY in the chair.

After roll-call and reading of the minutes of previous meeting, DR. WILL B. DAVIS, of Fort Worth, delivered an

ADDRESS OF WELCOME,

offering the hospitalities of Fort Worth, the Atlanta of Texas—the city of artesian wells, to the Association.

The VICE-PRESIDENT, DR. STARLEY, responded on the part of the Association, thanking the gentlemen and citizens for the hearty and cordial welcome so generously tendered.

About 200 Fellows were in attendance out of a list of 362 in the State. Forty-five new members were added to the rolls during the meeting.

Dr. C. B. Rains, a practitioner of over half a century, was unanimously elected an honorary member.

Reports from Sections being next in order, DR. R. H. CHILTON, of Dallas, Chairman of the

SECTION ON OPHTHALMOLOGY,

presented a paper on *Sympathetic Ophthalmia*. DR. W. B. DAVIS read one from the same author, on *Inflammation of the Middle Ear*. DR. J. P. HALL, of Galveston, presented one on *Weak Eyes, their Causation and Treatment*. These papers showed a thorough understanding of the subjects discussed by the authors, and were all referred to the Publication Committee.

DR. MAURICE SALM, of Austin, read an exhaustive *Analytical Report of 81 Cataract Operations*. In such cases as required extractions, he used Graefe, or Graefe modified, and in every case without an anæsthetic. The results are briefly these; 13 cases lost of the 81; 3 of the 13 cases were complicated with irido-cyclitis, and 6 of these can now be improved by an iridectomy; 40 cases cured with vision from 1 to $\frac{1}{7}$; 23 cases vision from $\frac{1}{8}$ to $\frac{1}{50}$, and 5 cases vision from $\frac{1}{50}$ to $\frac{1}{100}$.

SECTION ON SURGERY.

DR. D. F. STUART, of Houston, read an article on the *Advances in Surgery*, showing that most brilliant triumphs had been achieved during the last decade, especially in uterine and abdominal surgery.

DR. R. H. L. BIFF presented a paper upon the *Treatment of Strangulated Hernia in Reference to its Radical Cure*. His paper had the merit of original and clinical research, and was well received.

DR. A. P. BROWN, of Jefferson, on the *Surgery of the Pancreas*, with a case of cystic tumor growing therefrom weighing 21 pounds. Perfect recovery of the patient after operation.

SECTION ON PRACTICE.

DR. J. C. FIELD read a paper on the *Hot Springs of Arkansas, and the Treatment of Disease by its Thermal Waters*.

DR. J. M. WILLIS, one on the *Waters of Wootan's Wells, Texas*, a great health resort for invalids and for persons suffering from chronic diseases.

SECTION ON GYNECOLOGY.

DR. W. J. BURT, of Austin, chairman of this Section, read an elaborate article on *Surgery in Gynecology*, and particularly in reference to lacerations of the perineum and cervix uteri. He emphatically recommended restoration of lacerations by surgical procedure. He dwelt considerably upon the importance of early recognition and operation on lacerated cervix uteri, as a preventive of epithelioma of the neck. He argued that epitheliomatous diseases are at first local, and become malignant by cell proliferation. He believed that all the essential factors for the development of the papilloma exist in a lacerated cervix uteri.

DR. R. B. WHITE read a paper on *Phlegmasia Dolens*, and DR. G. S. SYKES, of Coleman City, one on *Puerperal Convulsions and their Treatment by Venesection*. This paper was freely discussed; the majority of speakers advocating venesection in preference to any one remedy, but urging the importance of delivery, if not already accomplished, as an essential consideration.

The following resolution was adopted concerning

UNDER-BIDDING IN PRACTICE,

Resolved, That it is *reprehensible* for Physicians to under-bid each other to obtain practice in private or public institutions.

The following resolution concerning

THE NEW YORK CODE OF ETHICS

was offered by DR. W. J. BURT, of Austin, and unanimously carried:

Whereas, The Texas State Medical Association desires the dignity and ethics of the profession sustained, and the unity and fellowship of its societies promoted; and,

Whereas, The Medical Society of the State of New York, by a vote of 55 to 18 in February last, refused to adhere to the Code of Ethics of the American Medical Association in reference to *consultations*; and,

Whereas, They adopted a revised code, contrary to the spirit and genius of the ethics of the American Medical Association. Therefore,

Resolved, That the Texas *State Medical Association* hereby proclaims its adherence to the *Code* of *Ethics* of the American Medical Association; and,

Resolved, That this Association send its delegates to the American Medical Association to meet in St. Paul, Minn., in June next, *instructed* to use the vote of the Texas State Medical Association in sustaining the dignity, fellowship, and ethics, as formulated in the Code of the American Medical Association.

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President, S. F. Starley, M.D., of Corsicana. *Vice-Presidents*, Drs. W. P. Burts, of Forth Worth; W. A. Adams, of Bryan; and Joe S. Willis, of Waco. *Secretary*, for three years, Dr. W. J. Burt, of Austin. *Treasurer*, Dr. J. Larendon, of Houston.

The usual resolutions of thanks were extended to the railroads, press, hotels, citizens, and committee of arrangements; and the Association then adjourned to meet in Tyler, Texas, on the 4th Tuesday in April, 1883.

After adjournment the members repaired to the El Paso Hotel, where the citizens of Fort Worth tendered them a banquet, reflecting her generosity and sustaining her name for hospitality.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

Adjourned Meetings, May 6 and 12, 1882.

(Specially reported for THE MEDICAL NEWS.)

IN pursuance of the resolutions passed by the Faculty at their late annual session, a special meeting was held in their Hall on the 6th ult. to consider unfinished and other business.

The Faculty met at 12 M., the President, Dr. William M. Kemp, in the chair.

New Rules for the Library, brought in by Dr. I. E. Atkinson, Chairman of the Library Committee, were presented and adopted.

DR. T. BARTON BRUNE, Chairman of the Committee to report on the subject of the establishment of a *Directory for Nurses*, presented a report containing suggestions for the carrying on of such a directory, which were largely founded upon the one now in such successful operation in Boston. At the same time, he showed how, without causing expense to the Faculty, it would in all probability become a source of revenue in a short time. The suggestions were, with some modifications, adopted, and the committee, consisting of Drs. T. Barton Brune, R. W. Johnson, and William Green, were reappointed and authorized to carry out the plans proposed.

DR. F. DONALDSON, Chairman of the Executive Committee, reported that they had elected Dr. G. Lane Taneyhill, Secretary, *vice* Dr. W. G. Regester, deceased, and Dr. Robert Wilson Assistant Secretary, and announced additional delegates to the approaching American Medical Association; also that Dr. J. S. Billings, Surgeon, U. S. A., had accepted the invitation which had been tendered him to be the Orator at the next annual Convention of the Faculty.

DR. JAMES CAREY THOMAS offered the following resolutions in relation to the

NEW CODE OF ETHICS

of the New York State Medical Society, which were adopted unanimously:

Resolved, That the Medical and Chirurgical Faculty of Maryland, having had its attention called by the address of Dr. Donaldson, the late President of the Faculty, to the Code of Ethics recently adopted by the State Medical Society of New York, and believing that intelligent consultations are not possible between scientific physicians and homœopaths, Thomsonians, eclectics, and other irregulars, hereby reaffirms its adhesion to the Code of the American Medical Association.

Resolved, That the delegates of the Faculty be requested to present these resolutions at the approaching annual meeting of the American Medical Association.

DR. JOHN S. CONRAD moved a resolution that a committee be appointed to investigate the subject of the proper safeguards that should be adopted by the State for the *protection of the person and estate, etc., of persons confined in insane asylums*, and to submit a report of the results arrived at, and a bill comprehending the whole subject in legal form to the next annual meeting. The committee shall examine carefully into the working of the laws now in force in other States, and obtain the advice of the best medico-legal talent of the State.

The resolution was adopted, and the President appointed Drs. J. S. Conrad, Thomas S. Latimer, Richard Gundry, Richard McSherry, and G. Lane Taneyhill.

The meeting adjourned to meet on the 12th of May.

MAY 12TH.

Meeting convened, and, after the transaction of some general business, a committee was appointed to collect funds for the erection of a building for the library.

The following was passed:

Resolved, That a committee be appointed to prepare a law, to be subsequently submitted to the Faculty before presentation to the legislature, regulating the sale of patent drugs in this State.

Adjourned.

KANSAS STATE MEDICAL SOCIETY.

Annual Meeting, held at Emporia, May 9, 1882.

(Specially reported for THE MEDICAL NEWS.)

THE Kansas Medical Society held its annual meeting at Emporia, May 9. Some seventy members were present, and twenty-four new ones were admitted. DR. G. W. HALDEMAN, First Vice-President, presided in the absence of the President, Dr. Stuart.

In his *Address*, Dr. Haldeman recommended that efforts be made to secure the passage of laws regulating the practice of medicine, the organizing a State Board of Health, and compulsory vaccination. Two plans were suggested to abate the nuisance of so-called patent medicines: First, to have them actually patented; and, second, to have them analyzed and the analysis published.

DR. B. E. FRYER, U. S. A., read a *Report on Ophthalmology*, especially with reference to the work done by the Ophthalmological Section of the International Congress.

DR. W. A. MCCULLY spoke briefly on the *Use of Plaster of Paris in Fractures, Iodoform in Surgery, and the Rubber Bandage in Erysipelas.* An interesting discussion followed.

DR. A. LEIGH read a *Report on the Advances in Surgery*, notably in operations in the abdominal region.

A *Draft of an Act to Regulate the Practice of Medicine and Establish a State Board of Health*, to be presented to the next Legislature in place of the one recently decided unconstitutional by the Supreme Court, was read by Dr. W. L. Schenck, and a committee was appointed to present it to the Legislature.

DR. STONE presented a specimen, and read a report of a case of *Gunshot Wound of the Heart* where the ball, calibre 34, passed through the chest-walls and the wall of the right auricle, and dropped into that cavity, the patient living seventy-six hours after the injury, although he received another shot which passed through the abdomen and the liver.

Papers were also read on *Syndectomy*, *Sanitation*, *Fractures of the Leg*, and *Morality from a Medical Standpoint.*

DR. COCHRANE, in a *Report on Obstetrics*, advised the use of chloroform and the forceps in cases of normal labor, which elicited a long discussion.

DR. MOTTRAM presented a pathological specimen of *Sarcoma of the Testicle* occurring in a child three and a half years old.

Resolutions condemning in severe terms the New York Code were offered, but not adopted.

Resolutions were adopted commending the work

of the National Board of Health, and urging Congress to increase the number of that Board to one from each State.

Resolutions were passed condemning the religious press of the country in advertising quack medicines and secret nostrums.

The following officers were elected for the ensuing year: *President*, Dr. G. W. Haldeman; *Vice-President*, Dr. W. S. Mendenhall; *Secretary*, Dr. F. D. Morse; *Assistant Secretary*, Dr. J. B. Hibben; *Treasurer*, Dr. W. W. Cochrane; *Public Orator*, Dr J. M. Lane.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Stated Meeting, May 3, 1882.

W. S. W. RUSCHENBERGER, M.D., PRESIDENT, IN THE CHAIR.

(*Concluded from p. 530.*)

DR. DA COSTA then reported some *Observations on Catarrhal Fever*. He said: those engaged in active medical practice must have been struck with the widespread prevalence of an epidemic of catarrhal fever presenting many curious features. As it is only by a study of all such epidemics that we shall ever learn fully to understand this dissimilar malady, I trust it may not prove without value to record my individual experience with it.

The disorder begins almost invariably in a sudden manner, sometimes with a chill, quite as often without it. I have known persons well in the afternoon, and in the evening with a decided fever, and suffering all the discomforts of the catarrhal malady. Among the first signs of this are pain in the throat, and a feeling as if it were filled up, yet looking at it nothing is seen but redness and some relaxation. Fever is by this time developed, at first of only moderate intensity and with a quick but very compressible pulse. Dry cough soon becomes a feature, occurring not infrequently in paroxysms, and now and then combined with loss of voice, and with difficulty in swallowing. The chest walls are sore, and the cough is painful. Frequent, rather difficult breathing, not associated with any marked physical signs except feebleness of respiratory murmur, is a common symptom. As the malady progresses, more obvious signs of bronchial catarrh may happen, and harsh breathing and dry râles be found on listening to the chest. But here and there will be a spot still marked by feeble breathing, a spot of seeming congestion of the lung and of impaired expansion. Scanty tenacious sputum, blood streaked, is perhaps noticed to become more copious and purulent only in cases in which the bronchial catarrh is prominent. The eyes are, as a rule, injected or watery, but nasal catarrh does not exist. Yet late in the disease it may come on, and the malady pass off, in the language of the patient, by a bad cold in the head. Besides these catarrhal symptoms, are pains,—chest pains, pains in the neck and scalp, pains in the loins and limbs. The chest pains are most peculiar and severe. They are sharp and like pleurisy, indeed they are so regarded. But only impaired respiration exists, friction does not, save in the rarest instances; and the character of the pain, its having its seat in the chest walls, is shown by its transferring itself with rapidity from one side to the other.

The state of the skin is at first dry and harsh. It becomes soft and clammy as the disorder advances, and copious sweats, especially at night, are common. The face at the outset is apt to be flushed, and what has particularly struck me in this epidemic as a feature which I cannot recall to have noticed so strikingly before, is a curious irregular mottling of the surface. This is very marked on the neck and breast, and might easily cause the case to be mistaken for scarlet fever or for German measles. But when closely looked at, it is seen how the capillary injection is really quite unlike the eruption of either.

As temperature observations on catarrhal fever are very imperfect, I recorded whenever a good opportunity offered as many as possible. Here is a case in which with the aid of a very intelligent nurse they were made three or four times daily, and begun a few hours after the first symptoms had manifested themselves.

1st day. 2.30 A.M., 102.2°; 6.45 A.M., 100.8°; 8 P.M., 101°.

2d day. 11 A.M., 100.8°; 9 P.M., 101.6°.

3d day. 2 A.M., 104°; 10.30 A.M., 101.5°; 3 P.M., 101.5°; 6 P.M., 103°; 9 P.M., 105°.

4th day. 7 A.M., 101.5°; 9 A.M., 99.5°; 11 A.M., 100°; 6 P.M., 100°.

5th day. 11 A.M., 99.2°; 9 P.M., 99.6°.

6th day. A.M., 99°.

7th day. A.M., 98.5°; no evening rise.

This temperature was the highest I have met with in an uncomplicated case. It attained its height on the third day, and is seen to be very irregular. In truth, irregularity of temperature is one of the characteristic features. The temperature is apt to be irregular until the whole disorder markedly declines, when it by gradual degrees, but in the space of a day or two, returns to the normal.

Next to the catarrhal and febrile symptoms the gastro-intestinal claim attention. Disgust for food, pasty tongue, are very usual, and attacks of diarrhœa not unusual. In some cases, indeed, the intestinal catarrhal symptoms are far the most prominent, and it may be that only with their subsidence the bronchial catarrh appears. Nor is it always a simple diarrhœa. Seizures bespeaking an irritation of the large intestine, diarrhœas soon merging into dysenteries form quite a fair proportion of the cases. The urine is high colored, scanty, but free from albumen, even in cases with a temperature of 105°. Only in instances of most marked pulmonary congestion have I known it to contain albumen, and then but in small quantities.

As regards the nervous symptoms, great lassitude, restless nights, and marked hebetude strike us most. With reference to the drowsiness, it is often so decided that it is difficult to believe that the patient has not taken opium. Delirium I did not once encounter; nor were the cutaneous hyperæsthesiæ as common as I have noticed them in other epidemics. In truth, on the whole, the nervous phenomena, except the hebetude, were less pronounced.

The duration of the disease is a short one. It does not, unless kept up by complications, exceed a week; nor did I see a fatal case, unless from complications. During the rather tardy convalescence, what forces itself on our attention is the weakness with the decided loss of flesh which so short a disease has occasioned. Of course, I am speaking only of marked cases, and not of the slight ones of a few days' duration that abound as a light manifestation of the epidemic influence. Glandular enlargements are very occasionally met with during the convalescence; more often did I notice inflammation of the antrum, with its distracting headache and sense of fulness and pain.

I have just alluded to the complications. Pneumonia, catarrhal and lobar, is the most common. And I am quite clear that the great prevalence just now of pneumonia must be mainly ascribed to the influence of the poison of the catarrhal fever. But this is too large a question to enter into here; as it would equally lead me too far to inquire whether there are any clinical differences which separate these pneumonias of epidemic origin from those originating from other causes.

Besides pneumonia, I have met with overwhelming attacks of pulmonary congestion. One, for instance, seen with a medical friend, in which a bright lad of sixteen perished who had not been ill forty-eight hours; perished with bloody tenacious sputum, temperature of 104.8°, intense dyspnœa, heavily congested lungs terminating in œdema, and amid vanishing pulse, wild struggles for life, and signs of non-aerated blood—in whom nevertheless there were no spots of dulness or bronchial breathing or other evidences of consolidation to be detected. Then I saw, with Dr. Herbert Norris, in a previously healthy, although rather delicate, young woman, who was seized with catarrhal fever just as her little girl was fairly convalescent from it, rapid phthisis develop itself; primarily in the lung which, three or four days after the acute setting in of the catarrhal malady, had slowly advanced to imperfect consolidation at its lower part, then more rapidly in the right. On the side first affected, a large cavity formed in the lower lobe, and became manifest on about the twelfth day of the disease. The whole duration of the case was just three weeks; the only instance of tubercular affection to be traced in the family was that of an aunt.

Another complication I have met with is gangrene of the lung. I saw such a case with Dr. Girvin. The sputum was horribly offensive, the wasting decided; a spot at the upper part of the left lung was gangrenous. These symptoms had set in acutely, about ten days after an attack of catarrhal fever in a young woman before in good health.

There is generally little difficulty in the diagnosis of the epidemic malady; the catarrhal symptoms, the signs of the general disorder, are very manifest. Occasionally a puzzling case happens; as for instance, one in a young girl with nosebleed, with diarrhœa, with high temperature, all within the first week of the disease. Yet the sequence of the phenomena prevented the affection from being mistaken for typhoid fever. The nosebleed came on after the marked catarrhal symptoms; the diarrhœa appeared on the fourth day, and lasted only forty-eight hours; the high temperature continued but for a day, and then there were very irregular variations until, by the eighth day, the temperature had declined to normal.

One of the most interesting features of the present epidemic is its infectious character. In one household five members took it in succession; in another, it began with grandchild and ended with grandmother, after two children, mother, and three servants had had it. Nor are those exempt who are confined to the house. One of the most marked cases I encountered was in a lady who has been for five years bedridden; in another, the patient had not been out of doors for ten months.

As regards the treatment, I have nothing to add to what is well known. It has to be symptomatic; and in the very young and the very old decidedly supportive. My experience, however, makes me urge the advantage of employing quinia almost from the start; and has taught me that small, repeated doses of opium have a most happy, steadying, and distress-allaying influence.

Cases of Poisoning from Drinking Impure Water.—DR. JAMES H. HUTCHINSON stated that, during the past three months, he had had under his care at the Pennsylvania Hospital a series of six cases which presented a rather unusual set of symptoms, and which possess so much interest that he felt justified in presenting brief accounts of them.

The patients were all employed in a large sugar refinery on the Delaware River front; where, however, none of them had worked more than two, or at most three, weeks before the occurrence of the attack. The cases so closely resemble one another, that the history of one will suffice for all.

R. R., æt. twenty-one, was admitted into the Pennsylvania Hospital, on January 30, 1882. His health has always been good until two weeks ago, when, without any apparent cause, he was seized with diarrhœa, attended with a good deal of prostration. He has had as many as ten to fourteen stools a day, and has also had at times nausea and vomiting, but is sure that he has never had fever. Yesterday the diarrhœa ceased, and he has had no passage since. Upon admission the patient is anæmic, and complains of excessive weakness, of vertigo, and of pains in his back and limbs. The tongue is dryish, and coated with a thin whitish fur; the appetite poor and the pulse slow; the temperature subnormal, 97°; there is no tympany. The examination of the heart, lungs, and urine gives negative results only; he was ordered a pill containing nitrate of silver gr. ⅓, and opium gr. ¼, three times daily, and placed upon a restricted diet. *Feb.* 2. The patient's bowels have not been moved since his admission; he feels less weak; his tongue is also less coated, but his temperature is still subnormal. The pill was discontinued, and he was ordered a teaspoonful of Huxham's tincture three times daily. *20th.* The bowels are now moved regularly; he does not appear to gain strength; he was, therefore, ordered cod-liver oil. *March 6.* Discharged cured.

When this case first came under Dr. Hutchinson's care, he was puzzled how to explain the symptoms it presented. The presence of excessive prostration, with a history of diarrhœa lasting for two weeks, seemed to point to typhoid fever as their most probable cause. Against this hypothesis was the fact that the patient was positive in his assertions that he had not had fever at any time since he was taken sick, that none was present at the time of his admission or subsequently, and that there was no tympany or rose-colored spots. His condition called, however, for a supporting treatment, and his diet was restricted to liquid articles of food.

The other cases came in rapid succession, and presented the same symptoms as the first case. There were in all of them prostration, slow, compressible and often dicrotic pulse, subnormal temperature, diarrhœa, sometimes accompanied by slight pain in the bowels, and absence of tympany. This similarity of symptoms appeared to indicate an identity of cause, and it was soon discovered that, in addition to having been employed in the same refinery, they had been all subjected to an influence which seems sufficient to explain the symptoms from which they suffered. It was found upon inquiry that water from the river Delaware is introduced into the refinery for use in cleansing the evaporating pans, and that, after being used for this purpose, is returned to the river above the point although at a considerable distance from that at which it is taken. This water, being more accessible to the workmen than the ordinary hydrant water, is freely used by them for drinking purposes. The water, although said to be filtered before being put to the use first referred to, is probably from the presence of organic impurities unfit to drink.

There can be but little doubt that the use of the water of the Delaware River, contaminated, as it must be, opposite Bainbridge Street, by sewage, was the cause of the singular symptoms observed in the six cases. Impure as it was, it did not, however, produce typhoid fever, and the cases show that while impure water may produce prostration as great as that seen in this disease, it will not produce the fever itself, unless it contains the specific typhoid germs.

The symptoms presented by these cases seem to have indicated the existence of blood-poisoning rather than of irritation of the bowels. The latter could hardly have existed without the presence of a certain amount of fever. The temperature records will show that at

no time in any one of the cases was there any elevation of temperature above the normal. The stools, too, indicated the existence of relaxation rather than of inflammation: they were rather dark in color and watery, and never presented the ochrey yellow appearance of the stools of typhoid fever. The cases further show that persons may become accustomed to the use of an impure water, or that at all events it may cease to excite in them after a certain time any active symptoms. It will be remembered that all the patients had only recently been employed in the factory, and the effects in drinking the water had shown themselves very soon after they had entered upon their duties. The older hands drank the water with impunity. The cases all did well, and required little treatment, Hope's camphor mixture being used in most of the cases to check the diarrhœa, and quinia or Huxham's tincture as a tonic.

It may be well to add that the attention of the proprietors of the refinery has been called to the supposed cause of the illness of their workmen, and they have taken the proper precaution to prevent the occurrence of further sickness among them by cautioning them against the use of this water for drinking purposes.

Dr. Hutchinson appended to his paper the histories of the remaining five cases.

NEWS ITEMS.

WASHINGTON.

(*From our Special Correspondent.*)

THE TONER LIBRARY.—A joint resolution has just passed both houses of Congress, by which the library of Congress will soon receive a valuable accession of medical and scientific works as a free gift. Dr. J. M. Toner, of Washington, proposes to give his entire library, comprising more than 20,000 books and pamphlets —many of which are exceedingly rare—to the United States. This library represents the lifetime accumulations of a lover of books, and Dr. Toner desires to place it where it will be securely preserved and be at the same time accessible to students. He imposes only the following conditions:

First. That the collection should be kept separate and apart from the other books and pamphlets in the library, in separate rooms or alcoves, and that it should be known and described as the "Toner Collection."

Second. That the collection be bound, when requiring it, in a uniform and satisfactory manner, and have placed on the back of each a parchment band to distinguish them, and that a device distinctive of the donation be stamped on the title page of each, and that they be kept accessible for reference, and be catalogued as speedily as practicable; and when they appear by title in the printed catalogue of the library, that some letter or symbol indicative of the collection be used, and that the condition and growth of the collection be made a matter of record in each annual report by the Librarian of Congress.

Third. That the collection be kept and used mainly for reference and be consulted subject to the rules governing the use of rare books, and be called upon for service only when no other copy of the book or pamphlet asked for is available, and not be taken out of the library except for special reasons.

Fourth. That he be permitted to make additions to the collection from time to time as he may desire, upon the same terms, and that he have liberty to insure the perpetual increase of the collection by the establishment of a trust fund for the purpose.

TORONTO.

(*From our Special Correspondent.*)

THE TORONTO MEDICAL SOCIETY.—At the regular fortnightly meeting of the Society, held on May 4, the following officers were elected for the ensuing year: President, Dr. G. Wright; Vice-Presidents, Drs. A. H. Wright and Wilson; Secretary, Dr. McPhedran; Corresponding Secretary, Dr. J. Robinson; Treasurer, Dr. Macdonald.

Two cases of dactylitis were brought before the Society by Dr. Oldwright. They were children aged four and one and a quarter years respectively. Pathological specimens, one of globular aneurism of the aorta within the pericardium, and another of multiple myoma of the uterus, were shown by Dr. Cameron; and Dr. Macdonald exhibited a cysto-sarcoma of the testis.

LONDON.

(*From our Special Correspondent.*)

RETIREMENT OF MR. TEEVAN.—Writing of these matters, reminds me that Mr. Teevan has just recently had to retire from practice on account of disease of the aortic valves with dilatation of the heart. His name is probably well known to your readers. He is a skilled lithotritist, and early adopted Bigelow's operation of litholapaxy, and has always ascribed to Bigelow the full credit of that operation. Early in life he was a colleague of Mr. Barnard Holt, but he has been long known as an uncompromising opponent of Holt's operation for stricture, and an earnest advocate of internal urethrotomy. He has not been connected with any medical school for many years, and has been surgeon to St. Peter's Hospital for Stone, which is viewed askance by the more orthodox among us. But in spite of this, Mr. Teevan has recently enjoyed a very good practice, and his removal just now will cause a good deal of regret on all sides.

THE SOCIETY FOR THE PROTECTION OF SCIENTIFIC INVESTIGATION.—When last I wrote to you we were greatly agitated by the prosecution of Dr. Ferrier for a supposed infringement of the Vivisection Act. Now we are rejoicing in the formation of a Society for the Protection of Scientific Investigation, with Sir William Jenner at its head, and all the chief scientific men of the Kingdom on its council or actively supporting it. The anti-vivisectionists are rather aghast at this step, and altogether they are showing signs of getting worsted in the conflict, though they are not beaten off the field. Would they were!

EDINBURGH.

(*From our Special Correspondent.*)

EDINBURGH UNIVERSITY.—The chair of Natural History rendered vacant by the resignation of Sir Wyville Thomson, who has since died, was recently filled by the appointment of Prof. Edwin Ray Lankester, of London. A few days afterwards, notwithstanding that he actively sought the chair, Prof. Lankester has thought fit to resign the appointment, much to the inconvenience of the university, as the summer session begins in May. Among several unimportant reasons for his resignation, he mentions the probability of the exclusion of natural history and botany from the medical curriculum by the executive commission which government proposes to appoint for the purpose of inquiring into the condition of the Scotch universities, and accomplishing any reform which may be thought desirable. The present income of the chair is over £2,000 per annum, but it would suffer a very material reduction were natural history removed from

the medical curriculum. Prof. Lankester's resignation has been followed by the prompt appointment of Prof. Cossar Ewart, of Aberdeen University, who was previously one of Prof. Lankester's opponents for the chair.

A COLLEGE FOR THE MEDICAL EDUCATION OF COLORED STUDENTS.—At a meeting of medical teachers and practitioners, called to confer with J. BERRIEN LINDSLEY, M.D., LL.D., of Tennessee, in regard to the interests of a medical college for colored students at Nashville, and held at the hall of the College of Physicians, of Philadelphia, May 8, 1882, Professor S. D. Gross was invited to the chair, and Dr. J. G. Richardson was directed to act as secretary.

Dr. Lindsley, at the request of the Chairman, stated that the Congregational, Baptist and Methodist churches of the North, generously maintained, in the late slave States, about twenty-four institutions of learning for the benefit of the colored people, at an annual expense of nearly $300,000. Among these institutions were three medical colleges, one at Washington, one at Raleigh, and one at Nashville; the last of these, the Meharry Medical Department of Central Tennessee College, had buildings costing $20,000, and was in his opinion decidedly the most favorably located.

His object was to gain the endorsement of representative physicians in the North, for the plan of creating a national board of trusts, chartered by Congress, for the medical education of colored people, which should be empowered to promote this most desirable object, by aiding the most promising educational establishment of the kind in the South, and further defraying the necessary expenses of those young persons of African descent who should display superior intellectual capacity, in Northern or European schools, as might best serve the great end in view, of the elevation of the negro race. It being further designed that special attention should be paid to the complete preparation of colored physicians as missionaries and explorers in Africa.

Dr. H. Hartshorne highly approved of the proposed plan as explained by Dr. Lindsley, and only feared that, unless the great advantages of his scheme were very fully understood, it would be difficult to induce all the various denominations interested in this missionary work to thus unite together for its successful prosecution.

Dr. Edward Hartshorne and Dr. L. D. Harlow expressed themselves as being very much interested in this admirable project of Dr. Lindsley's, and as ready to endorse all that he had planned for the elevation of the black people. They sincerely hoped there would be no difficulty in procuring the requisite charter from our National Legislature.

Prof. James Tyson observed that his study of the important subject of medical education had rendered him opposed to the erection of any new colleges, but he did not entertain the same objection to fostering an already established institution. For the last four years, colored students had matriculated at the University of Pennsylvania, and one of these graduated the past year with an average as high as that of three-fourths of the class. Another, who will probably graduate next year, has already passed in chemistry with the unusual average of 98 in a possible 100. Only one white student is even reported to have left on account of the admission of these colored men, so that the question is practically settled in regard to the University of Pennsylvania, as it is also in the affirmative in Harvard University.

Dr. J. Cheston Morris believed that, having lived formerly on a plantation in one of the Southern States, he was intimately acquainted with the black man's capacities, and he was satisfied that for twenty, forty, or perhaps one hundred years, but a small proportion of the negroes could acquire the preliminary training necessary for a great physician. Until that time he was convinced that the wisest plan would be to maintain a good medical college in the South, at some central point like Nashville.

Dr. J. Solis Cohen called attention to the fact that in seven years the Meharry School had graduated only twenty-three students, and urged the advantages of combining the three Southern colleges into one strong institution as soon as possible.

The Chairman, Prof. Gross, remarked that, if the negro race could develop a great physician in a hundred years, it would prove its vast superiority to the whites, who had required some two thousand years to accomplish the same feat. He believed that the blacks had capacities which in time will develop to a very high degree, but for the present the negro must have his own schools. Applicants had always been refused at the Jefferson Medical College, and it would probably be a long time before they gained admittance, if they ever did so. He therefore cordially approved of the plan of Dr. Lindsley.

Dr. Lindsley said he knew, from his own personal observation as former Health Officer of Nashville, that there were in that city hundreds of colored people suffering for want of proper medical care. This state of things, lamentable as it was, existed generally throughout the South, because white physicians could not attend the blacks, out of charity, to the extent they used to do, when amply recompensed for their services by the owners of these former slaves. It was to provide qualified medical attendants from their own people for these suffering human beings that he invoked the influence of the seventy thousand physicians of America, and the substantial aid of the benevolent public at the North.

Dr. J. G. Richardson suggested that the question now before the meeting was, not so much how far the black man could be medically educated, but whether this great experiment, which will certainly be tried, shall be attempted under the most favorable circumstances as contemplated by Dr. Lindsley's plan, or whether the pecuniary advantages which contributions from Northern philanthropists would procure, shall be frittered away in the incomplete support of six or eight feeble medical colleges. He, therefore, moved that a committee of three be appointed by the chair to prepare a suitable endorsement of the proposed National Board of Trusts for the medical education of the colored race.

Dr. Edward Hartshorne moved that the committee be authorized to add to its number, and invested with power to act for the meeting; which resolution and amendment were carried unanimously, and Drs. H. Hartshorne, Richardson, and Harlow, appointed on the committee.

On motion, adjourned.

PENSIONS FOR THE VICTIMS OF SCIENCE. — Prof. Dumas, the Perpetual Secretary of the Académie des Sciences, has received instructions from the Minister of the Interior for the preparation of a list of all the *savants* who either have died or have been injured during the execution of experiments, or in making investigations in the interests of science. It is the intention of government to accord a national pension to the widows and orphans of such *savants* who have died, or to those *savants* who have been injured. The list, it may be foreseen, will be a long one.—*Boston Journ. of Chemistry*, May, 1882.

THE PUBLIC HEALTH.—For the *week ending May 6*, the following additional facts have been reported: Brooklyn reports 9 new cases of *small-pox*, and 3 deaths for the week; St. Louis, 1 death in the city, 7 in the

hospital, and 12 new cases sent to the hospital; Cincinnati, 41 deaths; Hudson Co., N.J., 9; New Orleans, 15; Buffalo, 4 new cases; and San Francisco, 2 deaths.

Dr. A. M. Wilbur writes that *cerebro-spinal meningitis* has been very prevalent in West Unity, Williams Co., Ohio, 11 deaths having occurred there between the 5th February and the 27th of April, and also that other places in the same County are suffering from the disease. *The National Board of Health Bulletin* reports only 17 deaths in six of the largest cities in the State, representing 500,000 inhabitants, during the 13 weeks ending April 1, and but very few deaths since that date. In Buffalo, this disease continues prevalent, 11 deaths having occurred during the week. St. Louis and Vicksburg, each report 2 deaths; and San Francisco, 1.

There were 13 deaths from *diphtheria* in Brooklyn; 7 in St. Louis; 5 each in Hudson Co., N. J. and Cincinnati; 2 each in the District of Columbia and San Francisco; and 1 in Buffalo. From *typhoid fever*, there were 4 deaths in St. Louis; 3 in Buffalo; 2 each in Brooklyn, Cincinnati, and San Francisco; and one each in Hudson Co., N. J. and Augusta, Ga.

A slight decrease in the mortality from *scarlet fever* is observed in Brooklyn, the deaths being 28 as compared with 30 for the preceding week. There were 9 deaths from this cause in Buffalo; 6 each in Cincinnati and St. Louis; 3 in Hudson Co., N. J.; and 2 in San Francisco. There were 7 deaths from *measles*, and 7 from *whooping-cough* in Brooklyn; elsewhere there were few or no deaths. *Cholera infantum* caused 6 deaths in New Orleans.

Brooklyn reports 48 deaths from *consumption;* St. Louis, 21; Cincinnati, the District of Columbia, and Hudson Co., N. J., each 18; New Orleans, 19; San Francisco, 17; and Buffalo, 8. From *pneumonia*, there were 35 deaths in Brooklyn; 10 in Hudson Co., N. J.; 9 in Cincinnati; 5 each in St. Louis and the District of Columbia; 7 in Buffalo; 12 in San Francisco; and 3 in New Orleans.

For the *week ending May 13* the following causes of death may be noted:

Small-pox.—The mortality from this disease is still on the increase in Cincinnati. The deaths for the week amounted to 65, which is 10 in excess of the greatest number hitherto reported. Small-pox is reported to have broken out among the sailors on the steamboats on the upper Missouri. A number of cases were recently removed from the steamer General Meade at Benton, Montana. In the Northeast this disease can hardly be said to exist at the present time. In New York, Philadelphia, and most places in the Middle States, it is no longer prevalent. In the central part of the country it still maintains a hold; likewise, to some extent, in some places in the West and in New Orleans. There were 4 deaths in New York City, 6 in Philadelphia, 65 in Cincinnati, 1 death in Louisville and 6 new cases, 2 deaths in Pittsburg and 21 new cases, 3 deaths in Memphis, 3 in Wilmington, Del., 1 in Dayton, 1 in Omaha, 3 new cases in Detroit, 5 cases and 1 death in Lynchburg, and 2 deaths in Atlanta, 3 new cases and 2 deaths in St. Louis, and 10 deaths in Chicago.

Diphtheria.—There are no unusual reports with respect to this disease. The deaths in New York City were 42, an increase of 10 over the number in the preceding week; in Philadelphia, 4; in Pittsburgh, 3; in Chicago, 15; and in St. Louis, 2. In Boston there were 11 deaths and 21 new cases; and in Detroit, 12 new cases and 1 death. Elsewhere not over one death is reported in any one place, so far as we are informed.

Scarlet Fever.—Another slight decrease in the mortality from scarlet fever is reported in New York City. The deaths were 53. At one time within the past two months the mortality exceeded 80 per week. There were 7 deaths in Philadelphia, 6 in St. Louis, 2 in Chicago, and 7 in Cincinnati; 24 new cases in Milwaukee, and 12 in Detroit; no deaths occurred in Boston, but 13 new cases were reported. In a number of other places only four or five report 1 death each for the week.

Typhoid Fever.—A very marked decrease in the mortality from typhoid fever is observed in Philadelphia. The deaths were 11, the smallest number reported since March 18, and 14 less than the number for the preceding week. There were 3 deaths in New York City; 2 in Cincinnati, and 1 each in Providence, Louisville, Indianapolis, and Nashville. There have been no fatal cases in Boston since the week ending April 29.

Measles and Whooping-cough.—Measles caused 25 deaths in New York; 4 in Cincinnati; 3 in Pittsburg; 3 in Milwaukee; 16 in Chicago; and 2 in Louisville. From whooping-cough, there were 24 deaths in New York; 2 in Philadelphia, and 3 in Boston.

Consumption and Pneumonia.—Consumption shows a slight improvement in the mortality, but it is higher than usually occurs at this season. The deaths in New York were 102; in Philadelphia, 56; in Boston, 28; in Chicago, 16; in St. Louis, 15; in Cincinnati, 13; in Providence, 10; in Louisville, 5; in Indianapolis, 7; in Pittsburg, 6; in Detroit, 5; and in Nashville, 4. Pneumonia has caused an unusually heavy mortality for this season of the year. There were 111 deaths in New York City, the highest number recorded for the past three months. Philadelphia reports 37 deaths; Boston, 20; Chicago, 17; Pittsburg, 8; Cincinnati, 6; Providence and New Haven, each 5; Detroit, 4; and Louisville and Wilmington, each 3 deaths. It is more than probable that the continued prevalence of very unseasonable weather is chargeable with the maintenance of the unusual death-rate in the case of this disease.

Health in Michigan.—Reports to the State Board of Health for the week ending May 6, 1882, indicate that intermittent fever and remittent fever have increased, and that diarrhœa and influenza have decreased in area of prevalence; small-pox was reported present during the week ending May 6th and since at six places, as follows: At Flint and Manistee (two cases at each place), May 6th; at Detroit (one case, reported convalescent), May 6th, and a new case May 10th; at East Saginaw (two cases) and Saginaw City (one case), May 10th. May 4th, small-pox was unofficially reported at Menominee; authorities there have thus far failed to report the facts.

Camden County, N. J., Medical Society.—At the meeting of the Camden County, N. J., Medical Society, held on May 9, 1882, the following officers were elected for the ensuing year: President, Dr. E. L. B. Godfrey; Vice-President, John R. Hancy; Secretary, H. Genet Taylor; Treasurer, J. B. Mulford.

It was resolved to give encouragement and support to those colleges which, in obedience to the demands for a broader and more comprehensive medical training, have advanced the course of medical study.

It was also resolved that the greatest good to medical science, to the members of the medical profession, and to the public, is maintained by adhering to the Code of Ethics of the American Medical Association relative to consultations.

The Siamese Twins and an "American Special."—We quote the following charming piece of fiction from *Chambers' Journal* for March 4, 1882.

"When the Siamese twins died Philadelphia surgery had the honor of dissecting them, and under the peculiar circumstances . . . the public were in a fever-heat of expectation to learn whether they could have existed apart. Various were the artifices resorted to by the

specials to gain a knowledge of this fact, the doctors having sternly declared that they would not admit the press. . . . Medical students and full-blown doctors, with duly 'viséd' certificates, from other cities, increased to an alarming extent. Hospital porters were offered premiums to vacate their positions for one day only. But all was of no avail; the doctors closed the door and the operation began. At its conclusion it was ascertained that the twins could have undergone a successful severance in life. At that interesting moment. . . . one of the doctors observed an unusually life-like hue upon a subject waiting for dissection. But what was his horror . . . as the remark fell from his lips, to observe the corpse suddenly jump up and make for the door. He opened it in time and fled, followed by the enraged doctors. A cab was waiting outside, and into this popped the supposed corpse, to be driven like mad to the railway station, where the complacent special safely arrived with the knowledge that he had made a big beat."

APPOINTMENT.—DR. HEINRICH FRITSCH, late extraordinary professor at Henle, has accepted a call to the chair of Obstetrics and Gynecology at the University of Breslau, rendered vacant by the death of Professor Spiegelberg.

THE NORTH CAROLINA STATE MEDICAL SOCIETY AND THE NEW YORK CODE.—The special Committee on Ethics appointed by the North Carolina State Medical Society at its meeting last week, presented the following report:

Your Committee, to whom was referred the communication from the New Hanover County Medical Society in regard to the recent action of the New York State Medical Society, as embodied in the following words: "Members of the Medical Society of the State of New York, and the medical societies in affiliation therewith, may meet in consultation legally qualified practitioners of medicine. Emergencies may occur in which all restrictions should, in the judgment of the practitioner, yield to the demands of humanity," respectfully offer the following resolution:

Resolved, Regretting and disapproving this action as tending to the breaking down of the barriers between the regular and irregular practice of our profession, we hereby reaffirm our adherence to the Code of Ethics of the National Medical Association, and instruct our delegates to its next meeting to further all efforts that may be made to compel its members to a strict obedience to the mandates of the code.

THE MEDICAL ASSOCIATION OF THE DISTRICT OF COLUMBIA AND THE NEW YORK CODE.—At a meeting of the Medical Association of the District of Columbia, held at Washington, May 13, 1882, the following preamble and resolutions were adopted:

Whereas, The Medical Society of the State of New York has so modified the rules controlling its members as to permit of consultation with "irregular" practitioners of medicine.

Resolved, That this Association expresses its unqualified disapproval of the course thus taken, regarding it as detrimental to the progress of medical science, degrading to the dignity of the profession, and opposed to the best interests of the public.

Resolved, That the science of medicine admits of no sects or schools; its object is the rational study and treatment of disease. Medical knowledge is gained and applied by the same methods as in other departments of science, and the recognition of systems of practice which are committed to any exclusive dogma, or whose adherents assume designations implying the adoption of special modes of treatment, is inconsistent with the pursuit of medicine as a science, and with the honest and honorable practice of our art.

THE LINTON DISTRICT MEDICAL SOCIETY AND THE NEW YORK CODE.—At the annual meeting of the Linton District Medical Society, held at Mexico, Mo., May 2 and 3, 1882, the following resolutions were adopted:

Whereas, We have learned, with pain and humiliation, that the State Medical Society of New York, at its last meeting, greatly modified and changed the time-honored Code of the American Medical Association, by which it had been governed in the past, therefore be it

Resolved, That we, the members of the Linton District Medical Society, do most emphatically condemn and denounce the action of the New York State Medical Society, when it teaches that consultations may be held with all medical practitioners legally qualified, irrespective of the so-called schools.

Resolved, That we consider the action of said Society as highly revolutionary, and dangerous to regular medicine, and would therefore earnestly protest against the proposed innovation.

WHAT IS SAID OF THE NEW YORK CODE OF ETHICS.

Philadelphia, Boston, and Detroit unite with the smaller towns of the West and South, with few exceptions, in opposition. New York stands almost alone, and possibly New York City, for there is no doubt that a portion of the State will coincide with the general opinion.—*The Medical Annals* (the Journal of the Medical Society of the County of Albany, N. Y.).

We wonder how long it will be before the members of the New York Medical Society find out that the rest of the profession scattered among the fifty odd millions of people of these United States outside of New York and Brooklyn, will not be led or driven into any humiliating position, simply because the members of the New York Medical Society want to lead or drive them. —*The Detroit Lancet.*

There are some consulting practitioners who are naturally anxious to enlarge the area of their field, and to multiply the sources of their supply. These should remember, that all who now send (three-fourths of) their business to them will utterly and justly repudiate them just so soon as unclean consultations are held with irregular practitioners, even though these be "legally qualified." The medical army will be true to its leaders, but only so long as these are true to their colors.—*Gaillard's Medical Journal.*

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MAY 9 TO MAY 15, 1882.

CLEARY, P. J. A., *Captain and Assistant Surgeon.*—The leave of absence on surgeon's certificate of disability, granted him in S. O., 224, October 4, 1881, from A. G. O., is extended six months, on account of sickness.—*S. O. 107, A. G. O., May 9, 1882.*

HALL, W. R., *Captain and Assistant Surgeon.*—Assigned to duty at Fort Bliss, Texas.—*S. O. 95, Department of the Missouri, May 8, 1882.*

MAJORS C. T. ALEXANDER and J. H. JANEWAY, *Surgeons*, and CAPTAIN R. H. WHITE, *Assistant Surgeon.*—Detailed as members of a board of medical officers to examine into physical qualifications of members of the graduating class, and candidates for admission to Military Academy.—*S. O. 110, A. G. O., May 12, 1882.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

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ORIGINAL LECTURES.

THE TREATMENT OF CROUP.

A Clinical Lecture.

BY WM. T. PLANT, M.D.,

PROFESSOR OF CLINICAL MEDICINE AND DISEASES OF CHILDREN IN SYRACUSE UNIVERSITY, SYRACUSE, N. Y.

GENTLEMEN: Membranous laryngitis is one of the diseases in which medical treatment has always been most vacillating and unsatisfactory. Our fathers, rightly regarding it as a violent inflammation, fought it determinedly with their deadliest weapons. These, in the words of an old author,[1] were "bleeding, emetics, purgatives, and blistering."

Bleeding, first, "so as nearly to produce fainting;" if not relieved, more blood "by several leeches over the trachea." After bleeding, an emetic of ipecac and antimony, to be again and again repeated if the continuance of the disease—and the patient—afforded an opportunity. At the same time—and the sooner the better—"a large blister all across the throat or upper part of the chest" was in order. It was further recommended to keep up brisk purgation with calomel and jalap throughout the entire course of the disease. These sledge-hammer blows were supplemented by frequent smaller doses of tartar-emetic and calomel. To all this was added the "antiphlogistic regimen," which, in those days, meant little nourishment and no stimulants. Unless you call to mind the cat-like tenacity of life inherent in some children, you will be surprised when I tell you that a few survived both the croup and the treatment.

We do not work in that way now. If, as is often the case, we cannot do much good with our remedies, we endeavor not to do harm, and that is more than can be said for the old way.

If the medical treatment is to be of avail, it must be instituted early. In croup, delay is not only dangerous; it is fatal. As soon as a laryngeal cough, an increasing hoarseness, and obstructed inspiration give warning, the child, *nolens volens*, should be put to bed. The room should be well warmed; from 80 to 85 degrees Fahr. is not too high. The air should be moist as well as warm. A warm and moist air is relaxing and soothing; a cold and dry air is irritating to the inflamed larynx, and tends to induce paroxysms of cough and dyspnœa. There are different ways of charging a room with moisture. If it is warmed by a cook-stove, vessels of water may be kept boiling. The objection to this plan is that, if the apartment is small, it becomes overheated. Large volumes of steam may be generated by dropping hot irons or bricks into a vessel of water. Another plan, and an excellent one, is to curtain the bed with blankets and introduce steam through a tube communicating with a vessel of water standing outside the inclosure, over a gas- or spirit-lamp. In some children, spray may be sent directly to the inflamed surface by the steam atomizer. From ten to fifteen minutes' steaming every hour or two does much to soften the cough and relieve the dyspnœa. This instrument also affords a ready means of carrying a medicated vapor to the seat of trouble. Just now lime-water is being much used, there being some evidence that it has a solvent effect on the false membrane. Though doubting whether the minute quantity of lime introduced in this way can have an appreciable effect, I would not discourage its use, since the vapor of lime water is at least as good as that of pure water. There are other solvents of pseudo-membranes. Among the best of these is, according to experiments recently made at the New York Foundling Hospital, liquor sodæ, diluted about fifty times with water, or, perhaps better, with aqua calcis; it may be used freely with the atomizer. Feeble solvent power is also claimed for both lactic acid and chlorate of potash. If any of these agents can destroy the membrane, they should *a fortiori* prevent its formation if used early enough.

If not disagreeable to the patient, I think it well to add a little carbolic acid to these atomizing fluids. Unfortunately, some children are so young and many are so perverse, that effectual use of the atomizer is very difficult. But do not fail by some one or all of these methods to furnish to the child, for at least a large part of the time, a steam-laden atmosphere.

Perhaps something may be gained by the application of mild counter-irritants over the larynx. A slice of salted fat pork, made more irritant by dusting its applied surface with mustard, or black pepper, or powdered camphor, and stitched to a cloth passing around the neck, answers a good purpose. Hot poultices, and cloths and sponges wrung from hot water, are sometimes bound upon the neck. Without great care, they wet the clothing and the upper part of the chest, and do more harm than good. Some practitioners prefer the continuous application of cold, but I have had no experience with this method.

The hoarse dry cough and the tendency to dyspnœa will suggest to you an early resort to emetics and expectorants. It used to be thought, and some are still of opinion, that there is peculiar virtue in the harsher and more depressing emetics, such as antimony and hive syrup. For myself, while not objecting to giving these agents once or twice at the outset for their emetic effect, I am not favorable to their repeated administration. Being powerfully depressant, patients kept under their influence rapidly lose strength, and I doubt if their local action is better than that of lighter emetics, such as ipecac and alum, and the sulphates of copper and zinc. My preference is for the wine or syrup of ipecac, repeated whenever it becomes necessary to produce emesis. A teaspoonful of powdered alum mixed with honey or syrup is an old and still popular remedy. Very many physicians rely wholly on the sulphate of copper as an emetic. With the act of vomiting some secretion is carried from the larynx and trachea; perhaps pieces and casts of false membrane are thrown out, and considerable relief follows, but it is seldom permanent. Before long, in most cases, the dyspnœa again becomes urgent, driving us back to emetic treatment.

Towards the end, the stomach responds less readily to emetics, because, as I suppose, the functions of the nervous system are in abeyance. I have seen large quantities of nauseants given in the last stages of croup without result.

I had almost forgotten to say that apomorphia has gained some favor as a prompt and non-depressing emetic. As little as .0015 gramme, or the fortieth of a grain, hypodermically, will effect the object.

Because emetics bring some relief to urgent symptoms, there is a liability to their over-use.

Nothing is gained by keeping a child constantly

[1] Thomas' Practice, 1815.

nauseated; on the other hand, appetite and strength are lost and rapid prostration ensues.

Aside from favoring the secretion of mucus and driving from the windpipe, *occasionally*, the accumulated products of the inflammation, I doubt if anything is to be gained by the use of these agents.

Most authors recommend the warm bath early in croup. It reduces the fever, it relaxes the system, and is a reliable adjuvant to the emetic treatment.

Until a recent date, much reliance was placed on mercury as a remedy in membranous laryngitis, on the theory that it abated inflammation and promoted the breaking down and liquefaction of the false membrane; it was used early and late in all cases.

This treatment, once so popular, has fallen into comparative desuetude. I must confess that I am not yet convinced of its uselessness, and that I still continue the practice, partly because it has happened to me to see some recoveries under it, and partly because I would not hastily abandon a remedy that has been held to be of the greatest service by many eminent physicians. I do not believe that mercurials have any effect on the already formed membrane, but I am not certain that they may not so modify and lessen the inflammation that the materials for the manufacture of this membrane are no longer furnished.

But if mercury is to be of any use in a disease of such rapidity, no time is to be lost in bringing the system under its influence. Unless we can so give it as to insure prompt action, we had better not give it at all. I like the plan of small doses often administered. From .01 to .03 gramme—⅙ to ½ grain—of calomel may be placed on the tongue as often as every hour or half hour.

In some cases it becomes necessary to guard against diarrhœa, by the use of Dover's powder. Probably a systemic effect can be secured in this way quite as speedily as by inunction or subcutaneous injection. After a day or two of this frequent dosing, we may properly conclude that something of its constitutional effect has been secured. I would then suspend it for a time, or give it much less frequently.

In all instances where the croup is secondary to, or a concomitant of, other diseases, and in feeble children, I think it safer not to give mercury at all. Prof. J. Lewis Smith, in his most excellent work on children's diseases, advises a mixture of chlorate of potassium and muriate of ammonium for these cases, and gives us the following formula:

	Grammes.	
℞. Potassii Chlorate, . . .	4	ʒj.
Ammonii Muriat., . . .	2.6	℈ij.
Syrupi Simp., . . .	fl. 30	ʒj.
Aquæ, ...	fl. 60	ʒij.

Misce.

℞. A teaspoonful or two every half hour or hour.

While you are attending assiduously to the details of medical treatment, you will give some thought to the nourishment of your patient. If, in any acute disorder, support is necessary, it is so here. Probably there is little or no appetite, but the fever creates thirst, which should be assuaged, in part, by milk. Beef-tea and other fluid foods may be given, if desired, but milk is of more value than any of these.

Then as to stimulants, I advise an early resort to them. The labored breathing, the restlessness, and the enforced wakefulness, are so rapidly exhaustive, that they may properly be given from first to last. Do not think that the violence of the laryngeo-tracheal inflammation contraindicates their use; on the contrary, it creates a demand for them. Some of the authors tell you that when the heart shows signs of failure, *then* resort to stimulants. But why wait for exhaustion? Why not try to prevent it? If stimulants are adequate to rally from a low condition, may they not, if given in time, forestall that condition? I believe it is proper to begin their use as soon as you feel certain that you have to deal with true croup. They may be given at first in small quantity and at infrequent intervals, but when the disease is at its height and the labor of breathing is great, you may use them with unsparing hand. The disease creates a tolerance of them. A child of from two to four years, may take daily anywhere from fifteen to ninety fluid grammes, or from one-half to three ounces, of brandy or whiskey with only benefit.

But statistics are heavily against us in this disease, and it is more than possible that, in spite of our efforts, the condition becomes increasingly unfavorable. It is apparent at length that, without the intervention of surgery, the child must die.

The question of a resort to tracheotomy then presents itself and must be promptly decided.

Tracheotomy does not cure croup; it simply admits air to the windpipe below the point of obstruction. With time thus gained, the laryngeal inflammation *may* subside and the patient recover.

The death-rate having been high, the operation has never been a popular one, but it should be remembered that the mortality has been in spite of the operation, not because of it. As it is never entered upon until death seems to be inevitable without it, and as its performance under ether or chloroform is painless, I think we might well resort to it more frequently than we do.

Reports from some public institutions are quite in its favor. Of ninety tracheotomies in the children's hospital at Prague, nearly thirty-five per cent. were followed by recovery. This is a better showing, however, than most other institutions make, and far more favorable than statistics from private practice.

Age has its bearing on the success of the operation. The older the child, the better is its chance, because, mainly, the trachea and larynx are more developed. Under two years of age failure is the rule, though, like many rules in medicine, subject to exceptions.

There is a proper time in the progress of the disease for operating. You will be in little danger of resorting to surgery while there are still hopes of success through medical means. There is more danger of procrastinating until the patient is moribund. This mistake has, I think, been sometimes made. As soon as lividity of the lips and finger-tips shows that the blood is becoming surcharged with carbonic acid, then, and not much later, is the time for tracheotomy.

The probabilities of recovery after the operation are much lessened if there is coexistent bronchitis or pneumonitis; and, unhappily, one or the other is often present. Not only that; these diseases are often consecutive to the tracheotomy, and, in case of death, are prime factors in its causation.

To prevent the occurrence of these pulmonary troubles after the operation, attention must be given to the temperature and humidity of the air to be inspired. Since it is no longer warmed by passing through the nose and mouth, it should be warmed artificially from 85° to 93° Fahr.

A competent nurse should be constantly at hand, by night as well as by day, to regulate the temperature, to give necessary attention to the tube, and to administer proper nourishment at proper times. The difficulty of obtaining such help at an hour's notice constitutes one reason why tracheotomy in private practice compares unfavorably with the same operation in public institutions.

As the steps of the operation are given in all surgical works, you will not expect me to enter on that part of the subject.

ORIGINAL ARTICLES.

PROLAPSE OF THE LARYNGEAL VENTRICLES, WITH ILLUSTRATIVE CASES.

BY JOHN N. MACKENZIE, M.D.,
OF BALTIMORE.

(*Read before the Clinical Society of Baltimore, March 17, 1882.*)

CASES of this rare lesion have been observed by Moxon,[1] Morell Mackenzie,[2] Lefferts,[3] Waldenburg,[4] Cohen,[5] and Elsberg.[6] Moxon discovered prolapse of one ventricle in the larynx of a man whose voice had never presented anything remarkable, and who had died in Guy's Hospital from carcinoma of the stomach. No mention is made of the general condition of the larynx in this case.

Mackenzie's patient was brought in a moribund state to the Hospital for Diseases of the Throat and Chest, and died before any notes could be taken of his condition. Complete eversion of the left ventricle, and partial protrusion of the right sacculus from the ventricular orifice, was found on *post-mortem* examination. The laryngeal membrane was covered with superficial ulcers, and the rewere cavities in both lungs.

Lefferts diagnosticated eversion of both ventricles in the larynx of a man who had previously suffered from a chronic catarrhal condition of the pharyngo-laryngeal tract. No cause could be assigned for the prolapse, which came on suddenly, and, probably, during sleep. After a preliminary thyrotomy, Dr. Lefferts excised both ventricles, and effected a cure of his patient.

Waldenburg refers briefly to a case which had been mistaken for a polypus by a brother-practitioner, and which retracted within the ventricular orifice under long-continued astringent applications.

In Cohen's case eversion of the right ventricle took place during an attack of bronchitis, aphonia, with slight stridor in inspiration, following a severe spell of coughing. Under the insufflation of sulphate of copper, partial replacement of the anterior half of the prolapsed structure took place.

Elsberg's patient had been more or less hoarse from infancy; ever since an attack of typhoid fever in his sixteenth year, in which he entirely lost his voice, he had been subject to catarrhal troubles of the respiratory tract. The voice gradually returned after convalescence from the fever, and since then he has had four separate attacks of aphonia, which came on without apparent cause, and subsided without special treatment. Both ventricles were found prolapsed, and the general laryngeal mucous membrane in a state of chronic inflammation. After preparatory local treatment with iodine, the tumor on the left side was removed with cutting forceps, and the right sacculus was painted subsequently with astringent solutions, under which it retracted gradually within the ventricular orifice.

[1] Trans. Path. Soc., Lond., vol. xix., p. 65.
[2] Growths in the Larynx, Lond., 1871, p. 34.
[3] Medical Record, June, 1876.
[4] Berliner klinische Wochenschrift, 1881, No. 15, S. 212.
[5] Archives of Laryngology, Jan., 1882, p. 66.
[6] Ibid., p. 67.

To these cases, which are the only ones which I can find recorded in medical literature, I now add the two following, and in so doing, it gives me great pleasure to acknowledge my indebtedness to Dr. Morell Mackenzie, of London, at whose clinic they applied to me for relief, for permission to publish them.

CASE I.—A shopman, æt. twenty-eight, applied to me July 28, 1879, at the Hospital for Diseases of the Throat and Chest. He stated that he had suffered for a long while from a catarrhal affection of the respiratory tract; that two years previous to his application at the hospital he had acquired syphilis, and for the past eighteen months had suffered, off and on, from sore throat and hoarseness; that six months before he consulted me, his voice had become quite suddenly gruff and hoarse, and had been growing gradually worse ever since. He could assign no cause for the change in his voice. When he first came to the clinic, he was completely aphonic; suffered from dyspnœa on exertion, pain in swallowing, and slight tenderness over the larynx. He also complained of an uneasy sensation of fulness in the throat, which compelled him to cough. These symptoms had been present for several weeks prior to his first attendance on the clinic.

A chronically thickened and congested nasal mucous membrane; a large, flabby, and pendent uvula; a congested and greatly relaxed post-nasal and pharyngeal mucous membrane; a chronic, catarrhal condition of the laryngo-tracheal membrane as far as the laryngoscopic view extended, testified to the correctness of the patient's affirmation that he had suffered from repeated catarrhs of the respiratory passages. The epiglottis, ary-epiglottic folds, and ventricular bands, were especially reddened and thickened, and the same could have been said of the left vocal cord. There was also some slight inflammatory œdema of the ary-epiglottic folds, and the mucous membrane covering the arytenoid cartilages. Projecting from the orifice of the right ventricle, which it fully occupied, was a tense, smooth, semi-elliptical tumor, clothed externally with mucous membrane of a deep red color, and covered with small, glistening points, resembling the mouths of minute follicles. The mass, which was partially covered by a very thin pellicle of mucus, extended from the extreme anterior limit of the ventricle backwards to within a short distance of its posterior extremity, and inwards beyond the free border of the vocal cord, which it covered almost completely, the vocal process and a portion of its anterior third alone being visible beneath. Its central portion bulged slightly towards the median line; both its extremities were rounded, the posterior being larger than the interior. The tumor was moderately tense in consistence, and after repeated trials with a suitably bent probe, could be made to recede, very slightly however, within the orifice of the ventricle. The upper surface of the mass, or, rather, the mucous membrane which covered it, was continuous with the ventricular band, and the edge of the latter seemed more rounded and less distinct in outline than in the normal condition. Quiet and forced respiration had no effect upon the tumor; and in phonation, beyond an apparent increase in tenseness, no change could be detected in the size or position of the mass. The cervical glands were enlarged, and there was an eruption (syphilitic) on the face, for which he was under treatment at the Skin Hospital in Leicester Square.

His larynx was painted with a solution of sulphate of copper, and strong stimulant inhalations were prescribed thrice daily. Under this treatment the inflammatory condition of the laryngeal membrane subsided in a marked degree, and in a few weeks the voice became purer and clearer in tone. The appearance of the tu-

mor, however, remained unaltered. Operative interference was proposed, but declined, and the tumor was accordingly painted daily with strong astringent solutions of various substances—copper, iron, zinc, silver, etc.—and he was directed to inhale the vapor of the iodate of zinc. By the beginning of the following November, a notable change had taken place in the appearance of the tumor; it had diminished greatly in size, so that the anterior third of the cord and its free border were visible; and the tense, solid, glistening body observed at first was replaced by a flabby, wrinkled fold of a pale red color, which closely resembled a portion of relaxed mucous membrane doubled upon itself. During the act of phonation the fold receded slightly within the orifice of the ventricle, and the cord passed from under it as it approached the median line. The fold diminished gradually in size; and the patient, finding his voice only slightly hoarse, and suffering no inconvenience from his throat, ceased his attendance on the clinic.

CASE II.—A sewing girl, æt. twenty-two, appeared September 22, 1879, at the hospital with the following history: She had been married eight years, and is the mother of one child, now seven years of age. Her family are consumptive. Her husband has had some venereal disease, and at the time of their marriage had an eruption on the face. During her confinement she had a rash on the chest similar to that with which her husband had been affected. She had always been subject to catarrhal affections of the nose and throat, and has often suffered from hoarseness, but never had any serious trouble with the respiratory organs. On the morning of the 27th of March, 1879, she awoke to find that her voice had become gruff and hoarse, and easily tired on exertion. For this sudden change in her voice she could assign no cause. The aphonia was accompanied by a sensation of a foreign body in the throat, and dyspnœa, especially at night, when she "would make strange noises in her sleep." These symptoms were succeeded by gradually increasing aphonia; the breath became offensive, and cough, with the expectoration of mucous pellets, was added to her suffering.

When she applied at the clinic there was slight fulness of the cervical glands; the clavicles, ribs, and xiphoid appendix of the sternum were tender on pressure, and she complained of intense frontal headache at night, which prevented sleep. Her womb was prolapsed, and she informed me that she had had an uterine discharge for a number of years.

The naso-pharyngeal membrane presented a chronically congested, thickened, and relaxed appearance; the entire laryngeal membrane was deeply hyperæmic and moderately swollen. Both ventricular bands were thickened—the right presented a nodular projection in its centre. The right cord was streaked with fine, red lines; the left almost entirely obscured by a large, pear-shaped, smooth, tense, and shining body of a rosy hue. It entirely filled the ventricle, from which it manifestly sprang; it terminated anteriorly in a more or less peaked extremity, and posteriorly in a rounded border, while its central portion bulged inwards towards the median line. Its upper aspect was slightly flattened; its inner convex and smooth. The tumor appeared to be covered with a thickened fold of mucous membrane, continuous with that covering the corresponding ventricular band. It was not affected by quiet and forced respiration, nor in phonation was there any remarkable change in its form or position. Repeated attempts were made with the probe to return the mass within the ventricular orifice, but without success.

Under topical application of strong astringent solutions the laryngitis subsided to a considerable extent by the end of October, but the dyspnœa persisted and she still complained of the sensation of obstruction in the throat. The fold of membrane which apparently enveloped the tumor grew paler and thinner, and became covered with shining points, and the tumor itself was less regular in outline than at first; but the diminution in bulk was very slight. At this time she was seen by Dr. Morell Mackenzie, who exhibited her at his clinic, and proposed an endolaryngeal operation for the removal of the mass. The patient, however, hearing that a surgical procedure was contemplated, never returned to the hospital.

The etiology of prolapse of the laryngeal ventricles is obscure, and the imperfect data which the scanty literature of the subject affords render it difficult to arrive at any definite conclusions as to its precise pathological significance. It is possible that it may be due to a variety of causes. A remarkable feature of most of the above cases is that the prolapse occurred in persons suffering from chronic catarrh and relaxation of the mucous membrane of the respiratory passages, and it is therefore not improbable that an important predisposing cause of the condition may reside in chronic inflammatory disease of the ventricles themselves. To render this more intelligible, it is necessary to bear in mind the anatomical disposition of the parts. The laryngeal ventricles, or so-called ventricles of Morgagni,[1] consist of two portions, a vertical and a horizontal. The vertical portion, or sacculus, extends upwards and backwards in a curvilinear direction between the ventricular band and thyroid cartilage to a distance varying in different individuals. It is bounded internally by the ventricular band, whilst its external support is derived mainly from the muscular fibres of the thyro-arytenoideus externus. Superiorly, beneath the fibres of the compressor sacculi, is a fibrous membrane investing the pouch and its glands, and, according to Hilton,[2] attached internally to the ventricular band, anteriorly to the edge of the epiglottis, and superiorly to the upper edge of the thyroid cartilage, thus forming an internal and superior support to the sac. This, which may be regarded as its suspensory ligament, constitutes its chief anatomical safeguard against prolapse. The sacculus is embedded in a mass of loose, distensible connective tissue, containing fat and glands, which separates it on the one side from the ary-epiglottic folds and on the other from the thyroid cartilage and median thyro-hyoid ligament. The horizontal is separated from the vertical portion of the ventricle by a transverse fold or frænum.

Inflammation predisposes to inversion by causing relaxation of the ventricular supports. If long-continued, it may lead to infiltration and fatty degeneration, and finally induce a paralytic state of the muscular walls of the sac; and it is not difficult to understand how such a condition may eventually lead to abrogation of the suspensory function of the internal superior fibrous ligament. In chronic inflammatory disease of the ventricle descent of the sac may be furthermore facilitated by hyperplasia of the areolar tissue, with which the sacculus is surrounded, which thus, acting as a *vis a tergo*, may push the walls of the sac downwards towards the cavity of the larynx. When the inferior segment of the pouch engages in the constricted portion which separates the two ventricular divisions, or, in other words, when inversion is complete, strangulation takes

[1] These should properly be called the *ventricles of Galen*, after the name of their discoverer.—(Galen-De Usis Part. Corp. Hum., i., 7, Cap. xiii.) They were also known to Curtius, Carolus Stephanus, Bauhinus, Casserius, Fabricius ab Aquapendente, Riolanus, and others of the older writers. To Morgagni belongs the credit of not only describing these structures with great accuracy in the human subject, but also of acknowledging the claim of Galen to priority.—("*Galenus has cavitates princeps invenit et ventriculos appelavit.*"—*Morgagni.*—Anat. Lugd. Batav., I., xvi. p. 19.)

[2] Guy's Hosp. Rep.

place, vascular dilatation supervenes, and the sacculus presents itself at the glottis as a protuberant mass, covered externally by its thickened, congested mucous membrane, and consisting internally of its connective tissue-bed in a state of inflammatory proliferation.

A sudden loss of voice, therefore, with more or less stridor in inspiration after violent expiratory efforts, or occurring without assignable cause in a person suffering from chronic catarrhal affections of the respiratory mucous membrane, would suggest the possibility of ventricular prolapse; but the diagnosis can only be made with the laryngoscope. Here it is liable to be confounded with fibrous polypus of the ventricle. If the case be seen before strangulation of the mass takes place, and when the sacculus presents itself at the glottis as a thickened fold, the diagnosis may be made by the rolling inwards in phonation, and its appearance within the ventricular orifice of the prolapsed sac, as described by Lefferts and Elsberg; or it may be returned within the orifice by a suitably bent probe. If, however, the dislocated ventricle has become strangulated and converted into a mass of inflammatory tissue, its differentiation from fibrous polypus may be aided by attention to its immobility, its attachment in its entire length to the ventricular band, the negative results of forced respiratory acts, its more or less pear-shape, with the long axis *parallel* with the ventricular band and vocal cord, and its smaller end in front. The retraction of the mass within the ventricular orifice under astringent applications strongly favors, if it does not absolutely confirm, its inflammatory nature; and if the mass be bilateral, polypus may be safely excluded. Practically, however, the diagnosis will have little influence in the treatment, and the rules which regulate the surgeon in the removal of laryngeal growths in general are equally applicable here. If the forceps be used, care should be taken lest the ventricle be torn too forcibly from its insertion. The case of the shopman detailed above, and those of Waldenburg, Cohen, and Elsberg, teach that retraction of the sacculus within the ventricular orifice may be sometimes secured by the persistent direct application of astringents.

METASTASIS IN PAROTITIS.

BY H. V. LOGAN, M.D.

(*Read by appointment before the Medical Club of Scranton, Pa., and published by request of the Club.*)

ON Friday, May 20, 1881, I was called to see G. A. J., male, æt. thirty-eight years, and, on inquiry, elicited the following statement: Patient was taken sick with parotitis about April 27, but continued to attend to his business (banking) until April 30, when he took cold, had a severe chill, and remained sick in bed until May 11. During his sickness he was severely prostrated, frequently fainting when attempting to sit up. The *left* parotid was inflamed, and at the same time the *right* testicle was involved. Patient had previously suffered with varicocele in right testicle. His left testicle was not involved in the metastasis. Returned to his business from May 14 to 19 inclusive. On May 19 felt lame and stiff, and that night was awakened about 11 P.M. with severe pain in left testicle, which remained all night. On the next morning he sent for me. On examination found left testicle swollen and very tender. The inguinal glands on left side were also inflamed. Ordered the application of a lotion, consisting of equal parts of tincture of opium and tincture of belladonna; also gave opiates to relieve the pain, which was severe. At the same time he was suffering from inflammatory rheumatism, which soon subsided under the salicylate of soda. As the soda seemed to affect his bowels, an astringent was prescribed.

On May 24, phlebitis of left femoral, popliteal, and about one-third of the anterior and posterior tibial veins set in. There was great œdema of the lower leg and foot, together with severe constitutional prostration. Called Dr. R. A. Squire in consultation, and we gave the following:

℞. Ferri (Quevennes), . . . ʒj.
Spt. vin. gal.,
Syr. simp., āā, ... ʒij. M.
Sig. Teaspoonful every four hours.

For the enteric disturbance we gave—

℞. Pulv. aromat., ... ʒiij.
Tr. catechu, ... ʒiv.
Tr. cardam.,
Tr. opii, āā, ... ʒij.
Mist. cretæ.,
Syr. simp., āā, ... ʒiss. M.
Sig. Teaspoonful every two to four hours.

For the phlebitis, we used a lotion of the following:

℞. Tr. Opii, ... ʒij.
Liq. plumbi subacet. dil., q. s. ad. Oij.

We heated the lotion, swathed the limb with hot flannel dipped in the lotion, then covered it with oiled silk, next a thick layer of cotton batting, and bandaged the whole with a flannel roller. This dressing we would leave undisturbed for twelve hours. This hot pack seemed to exert a happy effect upon the inflamed vessels, and in about fourteen days the inflammation began to subside.

On June 1 typhoid symptoms appeared, with violent vomiting, diarrhœa, and tympanites. Gave the following:

℞. Bismuthi subnit., . . . ʒiij.
Opii pulv., ... gr. viij.
Plumb. acet., ... ℈j.
Syr. simp., ... ʒij. M.
Sig. Teaspoonful as needed for the gastric disturbance.

For the typhoid trouble we gave—

℞. Spt. terebinth., . . . gtt. c.
Pulv. acaciæ,
Sacch. alb., āā, . . . ʒj.
Aq., ... ʒij. M.
Sig. Teaspoonful every four hours.

His bowels were so sore that we had to relieve them with injections, and for the same reason were compelled to catheterize him every time he wished to urinate.

17th.—Collateral circulation was pretty well established, and œdema of the limb began to disap-

pear. The typhoid symptoms also began to subside.

21st.—Pleurodynia set in, and in his excessive weakness interfered materially with his respiration. For this I gave him ammonii chlor., ʒss., every six hours, in divided doses, which seemed to exert a good influence.

July 2.—Violent diarrhœa and vomiting set in, with severe prostration. His food was not assimilated, but passed through him little changed. Again returned to the bismuth and opium mixture. Also, gave him nutrient enemata, and tannic acid and opium suppositories.

6th.—Inflammation of left parotid gland set in. This soon extended through the external jugular, the subclavian, the axillary, the basilic, and part of the anterior and posterior ulnar veins. There was severe œdema of the lower arm, together with great pain, extending from the head, through the left side of the neck, and down the left arm. Was compelled to again resort to opiates, on account of the severity of the pain. The gland became so swollen as to draw down the whole left side of the face, including the outer side of the eyelids and the left side of the mouth, giving the left side of the face the appearance of having slid down the neck part way. For the gland, I first tried the application of cold, but, although the weather was intensely hot, yet the cold seemed to be disagreeable to him. Next I tried heat applied by means of small soft bags filled with parched flour. These bags, being loosely stuffed, adjusted themselves nicely to the swollen gland, and retained their heat a long time. The nurse changed them before they lost many degrees of heat, so that for four days I kept up a constant heat, day and night. I may state that in this case the heat was not only well borne, but was very agreeable to the patient. For the phlebitis, I used the same dressing as in the case of the leg, with the same good result. The inflammation of the gland and the phlebitis subsided at the same time, which began about ten days after its commencement. With the hope that I might reach the trouble constitutionally, as well as locally, I gave the following:

℞. Fld. ext. cimcifugæ, . . . ʒj.
Potass. iod., ... gr.xv.
Syr. simp., ... ʒj. M.
Sig. Teaspoonful every five hours.

After giving this about five days, I was obliged to desist, on account of the disorder of his digestive organs.

21st.—Phlebitis of right femoral, popliteal, and part of the anterior and posterior tibial veins set in. As in the case of the left leg, I was unable to say whether the external iliac was involved or not, but the femoral vein was inflamed clear up to Poupart's ligament, and the inflammation in the case of the left limb extended to the superficial circumflex iliac, the superficial external pudic, and the superficial epigastric. My treatment in this case was the same as in the phlebitis of the arm and the other leg, and was just as satisfactory. I will state that the inflammation in this leg was not nearly as severe as in the other limbs, although the result was the same, namely, the occlusion of the vessels and œdema of the limb.

29th.—Collateral circulation was established, the œdema began to disappear, and the patient began to recover. As soon as the patient was able to endure the journey, I ordered him to the seashore. Unfortunately, while passing through New York City, he consulted a physician, who advised him to use his limbs in walking, stating that the feeling in his limbs would tell him when he ought to rest. He did so, when almost immediately the phlebitis reappeared, œdema set in, and he was again laid up for three weeks. Under the same treatment originally used, the phlebitis and its results again disappeared, and he is now doing well in every way. I find that there is a slight circulation through the affected venous channels of the right leg, but can find none through those of either the left leg or arm, and from present appearances do not think that the injured veins of the left leg and arm will ever be of any use to him. Still, the collateral circulation of both seems to be sufficient, and both limbs seem to be well nourished.

[*Note.*—During the discussion which followed the report of this case, Dr. J. L. Rea stated that in three cases where metastasis had occurred, he had succeeded in causing a return of the peculiar morbid process from the testicle to the parotid gland (return metastasis) by poulticing the parotid.]

HOSPITAL NOTES.

PENNSYLVANIA HOSPITAL—EYE AND EAR DEPARTMENT.

(Service of DR. GEORGE C. HARLAN.)

THREE CASES OF MASTOID DISEASE, TREATED BY TREPHINING.

(Reported by DR. CHARLES H. MCILWAINE.)

CASE I.—M. B., a school girl, eight years of age, well developed, and previously in excellent health, had sore throat about a month ago, followed by pain in the right ear and slight discharge.

Dec. 27.—There is now very free purulent discharge and severe pain, particularly at night. There is a large perforation in the anterior and lower quadrant of the membrana tympani, and slight redness, swelling, and tenderness over the mastoid. Ordered warm poultices, to be renewed four times a day, and the ear to be douched twice a day with a solution of boracic acid ʒj to pint of warm water. Liq. morph. sulph. to be administered in ʒj doses.

29th.—Violent pain last night, and no sleep, even with morphia. The child cries almost constantly, and is restless and feverish, and without appetite. The mastoid swelling has greatly increased, displacing the auricle outwards and forwards, but there is no fluctuation. There is violent headache, and the whole side of the head is tender to the touch. The discharge continues; a free incision was made down to the bone through the tissues over the mastoid, which cut like cartilage, and about a thimbleful of pus escaped. The bone was bare and rough, but not perforated, and not soft enough to be penetrated by a steel director. Buck's drill was used, and a small opening was made through which a probe passed into the horizontal mastoid cell. A small quantity of pus was discharged. As the inten-

tion at first was merely to make the Wilde incision, the operation was done without ether.

30th.—Patient passed a comfortable night and has had no pain, is up and going about the ward. There is slight discharge from wound, but none from ear.

Jan. 7.—Has had no discharge from ear since operation; still some discharge from wound and from opening in bone.

19th.—Wound entirely closed; no discharge from ear, and no perforation can now be detected.

Feb. 11.—Membrane nearly normal in appearance; slight opacity. Hearing, $\frac{3}{15}$.

CASE II.—Hannah B., age eleven, was brought to the hospital June 24, when the following note was made: She has had discharge from both ears for about a year. The right membrane is opaque and retracted, and has two perforations, one above the short process of the malleus and one in the posterior lower quadrant. But little remains of the left membrane. There is a profuse and offensive discharge from both ears. The Eustachian tubes are not pervious. The mucous membrane of the pharynx is thickened, and the tonsils are enlarged. Her general health is poor. A 40-grain solution of nitrate of silver was applied to the left ear on a small pledget of cotton, and 20 grains to the throat. ℥j. of alum in a pint of warm water was ordered as a douche twice daily. Cod-liver oil and syrup. ferri iodidi were prescribed.

Aug. 10.—Discharge from the right ear very much lessened.

Oct. 26.—Boracic acid ℥j. to Oj. of warm water, as a douche, twice daily, was substituted for the alum, and a 20-grain solution of nitrate of silver was applied to both ears.

Nov. 23.—A small polypus was removed from the left ear, and a saturated solution of nitrate of silver was applied to its base.

April 7.—Has had only occasional discharge from ears, and consequently did not report at the hospital since last note. Four days ago the left ear began to be very painful; there is now intense pain, slight discharge, and considerable swelling of mastoid region and meatus; drum not seen distinctly; no polypus. Leeches were applied to the mastoid, followed by a poultice, and the hot-water douche was used every two hours. Morphia gr. $\frac{1}{8}$, p. r. n.

13th.—Free discharge from ear. Pain severe. Mastoid more swollen.

14th.—Ether was administered, and a free incision was made over the mastoid, giving exit to a large quantity of pus. The bone was found bared and rough over a space the size of a twenty-five cent piece. A small perforation was discovered, through which a probe passed inwards and forwards to the horizontal cell, and the opening was enlarged by boring with a director. A carbolized tent was introduced into the wound, and a poultice of flaxseed applied.

23d.—The nozzle of Anel's syringe was introduced into the opening in the bone, and a solution of salt and chloride of zinc injected, coming out through external meatus.

May 14.—No discharge from ear since the operation. External wound entirely healed. Malleus bared and out of place. Ceased to attend.

CASE III.—Gustav Engel, æt. six, just arrived from Denmark, came under treatment May 5. No history can be obtained, except that the patient has had measles, followed by an acute attack of pain in ear and purulent discharge. The posterior part of the right membrane is bulging and there is a small pinhole perforation. The mastoid region is swollen. The opening in the membrane was enlarged by paracentesis.

May 17.—Swelling over mastoid increasing. Ordered poultice continuously.

19th.—The swelling over the mastoid has markedly increased, and the pain is so violent that the patient cannot be quieted even with large doses of morphia. Yesterday he received a severe blow on the side of his head, knocking him down, which was followed by pain and swelling of the whole side of face. Examination showed membrane bulging again in the old place.

The patient was etherized and a free incision was made over mastoid, giving exit to one-half ounce of thick pus. The bone at upper part of mastoid was bare and rough over a space the size of a five-cent piece, which was softened but not perforated. The bone was bored through with a steel director at this point, making an opening free enough to admit a probe three-quarters of an inch in the direction of mastoid antrum. A carbolized tent was introduced into the wound and a poultice applied.

20th.—The patient has been entirely relieved of pain, he slept well last night, and this morning it is impossible to keep him in bed.

25th.—A solution of 2½ grains of chloride of zinc in an ounce of warm salt water, has been daily syringed through the mastoid cells and drum, passing out by the external meatus.

30th.—There is no discharge from ear and only slight discharge from wound, which has been kept open by the carbolized tent.

June 5.—External wound entirely healed; has had no pain nor discharge from ear since operation. Was removed from hospital and did not return.

Remarks.—The symptoms in all of these cases were alarming, and there seemed little prospect of their doing well under an expectant or temporizing treatment. The ear disease had, in fact, become a secondary consideration in the presence of the more serious danger of extension of the disease to the brain, through caries of the deeper parts of the bone or escape inwards of the pent-up pus. Giving free external exit to the discharge was merely carrying out one of the best-established principles of surgery. The relief was immediate and permanent, and the subsequent progress of the case was uninterrupted.

MEDICAL PROGRESS.

POISONING BY BORACIC ACID.—Two cases of poisoning from the surgical use of boracic acid are reported from Russia by MOLODENKOW, of Moscow. A five-per-cent. solution of boracic acid was used to wash out the pleural cavity of a patient twenty-five years of age, the operation lasting an hour, and thirty pounds of the solution being employed (!). Nausea and vomiting followed, the pulse became frequent, and the patient prostrate. On the following evening erythema appeared on the face, and spread, on the third day, to the neck, chest, and abdomen. On the fourth day the erythema had extended to the thighs, and small vesicles appeared on the face and in the throat; sight became dim, and the patient died, consciousness being preserved to the last. The second patient was sixteen years of age, and suffered from a lumbar abscess, which was opened and washed out with the same solution and for the same length of time. The operation was followed by symptoms precisely similar to those observed in the first case, and the patient died on the third day. In each case, it may be further noted, there were transient elevation of temperature, hiccough, skin eruption, and death with the indications of cardiac paralysis.—*Lancet*, May 6, 1882.

TREATMENT OF EXTRA-UTERINE PREGNANCY.—HUGO CLAU (*Thèse*, Berlin, 1881) says: One of the first indications when extra-uterine pregnancy is diagnosed is

to destroy the fœtus. To accomplish this result it was proposed to act on the maternal organisms. That uncertain and dangerous method was soon abandoned. Aiem proposed to destroy the fœtus by introducing a trocar through the abdominal wall.

Basedow first proposed to puncture the ovum through the vagina. This last method gave good results in the hands of Kiwish.

To destroy the fœtus we may—

1. Puncture the ovum by means of a trocar introduced through the abdominal wall or *per vaginam*, and let out the amniotic fluid surrounding the product of conception.

2. Puncture the fœtus itself, and kill it in that manner.

3. Inject the fœtus with morphia and thus destroy it.

4. Destroy it by electro-puncture.

Laparotomy must be performed if indicated.

SACHS (*Thèse*, Berlin, 1881) says, regarding this: According to the old authorities, laparotomy is always indicated when the fœtus still lives. If dead, it should not be performed. This doctrine is still adhered to by many authors. In the preceding article several methods are proposed with the objects of destroying the fœtus and arresting further development of the pregnancy.

In a certain number of cases the cyst containing the fœtus does not break, but the contents cease to live, and not only is there no augmentation of volume, but it really shrinks more and more; finally, fatty degeneration attacking the fœtus itself, a compact mass is found in which it is extremely difficult to recognize a fœtus. This is one method of recovery from extra-uterine pregnancy.

But when extra-uterine pregnancy with living fœtus is diagnosed, should the child be destroyed, or laparotomy be performed? At first thought one would actually select the first, as being more easily performed, and at the same time less dangerous.

If the infant is dead, it seems best not to interfere. But several authors have reported cases in which, abscesses having been formed about the fœtus, the mother died. Keller seems to have been the first (1872) to perform laparotomy for lithopædëon. After that, memoirs on the subject were published by Parvy, Litzman, Dechamps, etc., in which it is shown that lithopædëon constitutes a permanent danger for the mother. Hence laparotomy is indicated in this case. A general summary would seem to show that laparotomy is always indicated in extra-uterine pregnancy.—*North Carolina Med. Journ.*, April, 1882.

ENCYSTED BULLET REMAINING TWO YEARS IN THE BASE OF THE SKULL.—At the meeting of the Cincinnati Academy of Medicine held April 10, DR. SCHWAGMEYER related the following interesting case. A girl about nine or ten years of age was shot accidentally by a little boy two years ago next June. The ball entered the head just above the eye, penetrated both tables of the skull, causing an effusion of blood in the orbit, so that the eye protruded. It was thought that the child would die. Dr. Ayres was called in consultation by Dr. Fishburn (who also attended the child) and himself, but they all agreed that nothing could be done, and the child was treated as symptoms arose. Contrary to expectation, the swelling in the eye retracted, sight became normal and the child got well in six weeks. The only remnant of the injury was a small ulcer in the inner margin of the eye. This healed occasionally, and then the child would complain of headache, which would disappear again when the ulcer reopened. There was a small sinus near the lid, but it was not probed. There seemed to be connection with it and the tract of the wound. She was sent to the country, where she spent the summer, and also last winter. Six weeks ago she complained of pain in the back and occasional slight headache, but continued to play every day on the street. Last Monday night convulsions set in, with all the symptoms of acute meningitis, from which she died. A post-mortem examination showed the brain highly congested, the arteries being almost black and the surface studded with minute abscesses. There was no fracture of the orbit. The brain was examined diligently for the bullet at the base, but this was nowhere to be found. Hope of finding it was almost given up, when a minute spot was detected in the sphenoid bone, below the middle lobe of the brain, near the sella turcica. This portion of the bone seemed to be elevated, and it was only by close examination that the bullet was discovered. It was then carefully chiselled out of the osseous structure in which it had been completely encapsuled.

The speaker could hardly believe that the child died of the injury, because the bullet was entirely closed in, and there was no tract of inflammation from the seat of injury to other parts of the brain. As the mother died of consumption, and the child was always sickly, the speaker suspected tubercular meningitis, and hardly regarded the gun-shot injury as the cause of death, but looked upon it as entirely independent of the meningitis. The child was said to have run its head accidentally against a wagon about one week ago; he did not know whether that could in any way account for the death of the patient.—*Cincinnati Lancet and Clinic*, April 29, 1882.

PHTHISIS IN DIABETIC SUBJECTS.—In an interesting work by Leyden on this subject, published in the *Zeit. f. klin. Med.*, Bd. IV., the following are especially deserving of notice.

Phthisis generally develops in diabetics with but slight general disturbances. The patients cough very little or not at all, and the fever is slightly marked or may be entirely absent; hæmoptysis rarely occurs, and Leyden has never seen a profuse pulmonary hæmorrhage. (Rohden-Lippspringe, however, reports a case of diabetes in a man who died suddenly from pulmonary hæmorrhage.) The progress of the disease is extremely rapid. Leyden was able to obtain post-mortem examinations of seven cases of diabetes complicated with phthisis of different grades of severity. The anatomical peculiarities were of three kinds: 1. There was an entire absence of miliary tubercle. 2. Giant cells were rarely found, from which it may be concluded that diabetic phthisis is more of a local than infective affection. 3. Extensive arteritis causing obliteration of the arteries, and reaching from comparatively large branches to the finest twigs on the pulmonary alveoli.—*Deutsche Med. Wochen.*, April 1, 1882.

DISLOCATION OF THE BONES OF THE CRANIUM AS A CONSEQUENCE OF ACUTE MENINGITIS.—This lesion has not been as yet noticed by authors who write on infant pathology, although, according to PARROT (*Revue de Med.*, Feb. 1881), it is by no means rare.

He gives three cases in which this lesion existed, and which was only discovered *post mortem* after the calvarium had been stripped of the soft parts which covered it. It consists of a dislocation of the cranial bones, with an effusion between the borders of a sanguinolent fluid. The separation is greatest at the coronal and sagittal sutures, near the bregma, where the separation may be from three to four millimetres. It shows well on the dried skull.

This dislocation appears because the contents of the skull become suddenly too great for its size, and the force from within overcomes the force which holds the bones together.

As to the cause of the expansile force, we can find

it in the enlarged volume of the encephalic mass, and in the development of the cephalo-meningeal lesions. Age plays an important rôle in the production of this lesion. All the cases mentioned by Parrot were neither newly born nor were they adult. They belonged to that period of life when we find no membrane between the bones, and where, on the other hand, the sutures had not acquired the solidity they possess later.

Can cranial dislocation be diagnosticated during life by any particular symptoms? As to that our author can not state positively, nor does he feel justified in offering an opinion.—*Cincinnati Lancet and Clinic*, April 29, 1882.

CASE OF CHRONIC CYSTITIS; CYSTOTOMY; RECOVERY.—MR. HAMILTON, House-surgeon to the Northern Hospital, Liverpool, reports the following case: A sailor, aged twenty-seven, was admitted on January 15, 1881. The illness dated from two months before admission, when, seven weeks after recovery from a swollen testicle from injury, he was much exposed during a stormy voyage to cold and wet. He found himself unable to retain urine, which constantly dribbled away from him, or was passed with straining and pain.

On admission, he had severe pain at the end of the penis, both before and after making water; marked incontinence of urine, with frequent painful attempts at micturition. There was congestion of the glans penis and prepuce, but no stricture of the urethra, nor stone in the bladder, into which the passage of a sound gave great pain. The urine was thick, ropy, fetid, and contained pus in considerable quantity. His bed and clothes exhaled a strong mousy, urinous odor.

During his stay in hospital, all the usual methods of treatment were diligently employed, but without effect. Such internal remedies as buchu, uva ursi, benzoic acid, copaiba, solution of potash and henbane, belladonna, etc., and locally washing of the bladder with bismuth and morphia, quinine, dilute nitric acid, and suppositories of morphia and belladonna. Relief to the pain was given by hypodermic injections of morphia, but the disease went on from bad to worse. Continuous draining of the bladder by catheter and tubing was attempted, but, adding fearfully to the agony, had to be discontinued after a few hours. Under these circumstances, and especially as the general health was now much affected, cystotomy was determined upon.

On June 30, 1881, under ether, the patient being in the lithotomy position, the ordinary lateral operation as for lithotomy was performed; the finger was passed into the bladder, and it was thoroughly explored. The cystic mucous membrane felt soft and velvety, and no ulcerated or gangrenous portions could be discovered. A drainage-tube was then passed into the bladder; a suppository of one grain of morphia into the rectum, and he was placed in bed. His progress was most satisfactory; and, though weak, he was able to be out of bed in six weeks. At the end of two months he began to void urine per urethram, with only occasional attacks of cystic pain; still it was considered advisable to enlarge the wound so as still to ensure complete drainage. In October the sinus was allowed to close, being occasionally cauterized to assist this process. He now went to the Walton Convalescent Home, but had to be again admitted, as the sinus still allowed a few drops to pass; this was remedied by excision of the sinus and deep stitching.—*Lancet*, April 29, 1882.

URÆMIA.—In a case of scarlatinal nephritis, with uræmic convulsions, Dr. D'Espine, of Geneva, employed copious venesection with most satisfactory results, and he caused a chemical analysis of the blood to be made. The facts ascertained are of considerable interest. The urea was found to amount to the enormous proportion of 3.3 parts per thousand of blood and 6.5 per thousand of serum. This is about twelve times the normal quantity, and twice as much as was present in a case of uræmia examined by Picard (1.5 of urea in 1000 of blood). Of course this does not prove urea to be the cause of the symptoms. Würtz and Chalvet failed to find any increase of urea in the blood, an observation which is of more significance than the innocuity of injections of urea (ascertained by Feltz and Ritter), since the latter may be explained by the rapidity of elimination. The last-named observers, it may be remembered, ascribed the symptoms to the excess of potash salts, and in the case of D'Espine these also were increased to about three times the normal quantity. Moreover, two-thirds of this were contained in the serum, the normal relation being thus inverted, since almost all the potash in normal blood was contained in the globules. D'Espine is inclined therefore to regard as the explanation of uræmia—(1) An accumulation of potash in the serum, derived from the uneliminated detritus of red corpuscles, the destruction of which may be facilitated by the accumulation of urea in the blood. (2) To an enormous increase of the arterial tension in consequence of the direct action of the dissolved potash salts on the endocardium and on the nerves of the heart. The venesection acted probably in a complex manner, by eliminating some of the toxic agent, and by suddenly lowering the arterial tension.—*Lancet*, May 6, 1882.

TREATMENT OF ACUTE DYSENTERY WITH ACONITE.—DR. WM. OWEN reports one hundred and fifty-one cases of acute dysentery occurring in the Convict Hospital, Port Blair, India, which were treated with tincture of aconite; all the cases were typical examples of acute dysentery and all, with one exception, recovered. He states that he was led to give aconite a trial, as the remedy most likely to be successful, from the following considerations:

(1.) From its beneficial action in other acute inflammations.

(2.) From its effects on the capillaries of the skin, which it dilates, thus relieving internal congestion.

(3.) From its antipyretic action in febrile cases.

(4.) From its sedative action on the mucous membrane of the stomach and intestines, and its beneficial action in some forms of dyspepsia. In the first case in which he tried this remedy he was somewhat diffident, and he had ten cases in which a combined treatment of ipecac and aconite was used. However he soon discontinued the ipecac entirely, finding there was no occasion for its use.

Dr. Owen gives one minim every quarter of an hour for the first two hours, and a minim every subsequent hour, or thirty minims in twenty-four hours; this method he finds to be followed by the best results, inasmuch as the action of the medicine is more rapidly established, and an effect on the disease was more quickly produced than by the other methods.—*Indian Med. Gaz.*, April 1, 1882.

AFFECTION OF THE HEART IN DIPHTHERIA.—With the exception of the diphtheritic endocarditis described by Bouchut (to a large extent, if not altogether, a product of the scientific imagination), the chief alterations found in the heart after diphtheria affect the muscular substance. Granular degeneration of the fibres has been especially conspicuous in cases of death with the symptoms which it is customary to refer to cardiac paralysis, although the precise significance to be attached to this degeneration has been hitherto a matter of considerable doubt. A series of cases of this character has lately been very carefully studied by Leyden

of Berlin. In all, the alterations in the muscular substance were so marked, and of such a character, as to justify the opinion that they were really inflammatory. Multiplication of the intermuscular nuclei, and the occurrence of degenerated foci, the result of the atrophy of these nuclei, constitute its special characters, these alterations being usually accompanied by the fatty degeneration of the muscular fibres themselves. But the two changes do not correspond in degree, or even in distribution. To this affection must be ascribed the extravasations in the substance of the heart occasionally noted, its soft consistence, and the dilatation which it undergoes. Leyden conjectures, indeed, that the cardiac failure, usually regarded as paralytic in nature, may be in reality the effect of these muscular changes. Their relation to the process of the general disease is a question of much interest, on which, unfortunately, Leyden has little light to throw. He has failed to find micrococci in the altered tissue, but as he has also failed to find them in the kidney (in which their occurrence has been lately demonstrated), it seems still possible that bacteria may underlie the cardiac as well as the nephritic changes. The former resemble closely those which occur after typhus fever and some other acute specific diseases. A very important practical question is the character of the symptoms which are produced by the change, and by which its presence can be recognized during life. They may occur during the height of the disease or during convalescence, and it is particularly during the latter that their detection is so important, since they indicate a grave danger, which may, to some extent, be met by treatment. The symptoms are chiefly those of cardiac weakness, but to certain of them Leyden attaches especial significance. One of these is the gallop-rhythm of the heart sounds, which he regards as one of the surest indications of dilatation of the left ventricle, with irregular tremulous contractions. Vomiting is another frequent symptom, and always, from this cause, indicative of imminent danger. It is not a direct symptom, but is probably due to an irradiation of the disturbance to other parts of the pneumogastric nerve. The tendency to this cardiac failure constitutes a serious objection to the use of depressant remedies, such as salicylate of soda, especially to pilocarpin, and to the repeated use of any emetic.—*Lancet*, May 6, 1882.

FRACTURED RIB FROM MUSCULAR ACTION.—M. DESPRES relates (*Gaz. des Hôp.*, Feb. 28) one of these rare cases in a lady, fifty-three years of age, and in good health, except for a temporary attack of chronic bronchitis, with a paroxysmal cough. During a fit of coughing, she fractured the eleventh rib of the left side, four fingers' breadth from the junction with its cartilage. Malgaigne's diachylon plaster was applied, and in eighteen days consolidation was quite complete, so that the patient could lie easily on the injured side. [In the *Union Médicale* of April 29, M. Doit, of the Vincennes Convalescent Asylum, relates the case of a tailor, fifty-nine years of age, who, while about to sew, was seized with cough, during which his sixth rib on the left side was broken at its anterior third. There was much greater mobility of the fragments in this case, and reparation was much slower than in the other.]—*Med. Times and Gaz.*, May 6, 1882.

HOT BATHS IN THE TREATMENT OF APPARENT DEATH IN THE NEWLY-BORN.—DR. GOYARD read a note before the Académie des Sciences, on February 27, in which he detailed the account of the case of an infant apparently stillborn, and in whom frictions, artificial respiration, etc., had been fruitlessly tried, who was restored to life after fifteen seconds' immersion in a bath at 45° C. He also reported the case of an infant aged fifteen days, who, after gradually sinking, passed into a condition of apparent death, the body being cyanosed and the heart beats imperceptible to auscultation. When placed in the hot bath the infant recovered in a few seconds, and the same condition occurring again on the next day, it was again restored by the same procedure. Dr. Goyard says that if the baths are not instantly efficacious, there is no use in persisting in their use.—*Revue Intern. des Sci. Biol.*, April 15, 1882.

DIABETES INSIPIDUS TREATED WITH ERGOT.—DR. JOHN MACAULAY and MR. SAMUEL MACAULAY report the following case: Mr. W. A. C., aged forty, came under our care in the beginning of December last, complaining of headache and disordered digestion, which were abundantly demonstrated by the appearance of his tongue, as it was covered with a creamy fur. He stated that for a short period prior to consulting us he had suffered from inordinate thirst and urination. His pulse was rather rapid the first time we saw him, but it was afterwards quiet. His family history was excellent, and he himself had enjoyed good health until about two years ago, when he suffered from an acute attack of Bright's disease.

On examination his urine was found to be pale, of acid reaction, specific gravity 1002, and containing traces of albumen, but no sugar. He was ordered stomachic medicines at first, which had the effect of improving the condition of his digestive organs; then he was placed upon iron and quinine for some three weeks, but with no amendment of the diabetic symptoms. As he was passing enormous quantities of urine —generally from eight to ten quarts per diem—and was consequently losing flesh, we determined to try the effects of ergot, which remedy has been so successful in the hands of Dr. J. M. Da Costa, of Philadelphia, in the treatment of diabetes insipidus. Accordingly he was prescribed drachm doses of the liquid extract of ergot three times a day, on January 3. There was no change observed in his condition until the 7th of the same month, when slight diminution of thirst and diuresis took place, and, at the same time, the slight pain which he had complained of in his head now became so very severe that it was necessary to discontinue the administration of the ergot. In the course of a day or two the pain in his head had considerably abated, but the thirst and urination again increased. The ergot treatment was resumed on the 12th of January, in similar doses, and on the 23d the intense thirst and excessive urination suddenly gave way to the normal condition of things in these respects; but again at this time he complained of the most excruciating pain in his head, which was relieved by withdrawing the ergot and giving a hypodermic injection of morphia. Since then there has been no return of the urgent thirst and diuresis; but the pain in the head is subject to periodic exacerbations and remissions, and is neuralgic in its character. We have no doubt that it will be at least temporarily relieved.

Remarks.—The above, although an undoubted case of diabetes insipidus, was complicated with Bright's disease, and this fact rendered the result of the exhibition of ergot a matter of considerable doubt, but the satisfactory effect produced has fully justified the experiment. There was no slowing of either the pulse or breathing produced in this case by the administration of ergot. There can be no doubt, from the results in the cases of diabetes insipidus which have been recently treated with ergot, that it is a remedy which has a powerful control over this most obstinate disease; and, if it can be proved to be an unfailing remedy for it in the future, then one more ailment will have been rescued from the category of "hopeless" diseases.—*Lancet*, April 29, 1882.

THE MEDICAL NEWS.

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OF MEDICAL SCIENCE.

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SATURDAY, MAY 27, 1882.

PARTIAL RESECTION OF THE BODY OF A VERTEBRA.

DR. JAMES ISRAEL, of the Jewish Hospital, in Berlin, gives an extremely interesting account of this novel operation in the *Berliner klinische Wochenschrift* for March 6, 1882.

Resections of the spinous processes, or of the posterior arches of the vertebræ, are not very rare. A very complete and excellent discussion of the subject is given by Dr. Otis in the *Medical and Surgical History of the War of the Rebellion.* Even the casualties of such a gigantic war furnish nothing in the way of designed and purposeful operations on the body of a vertebra, beyond the mere removal of necrosed fragments.

Hence this case is of very unusual interest. It was that of a man of thirty-four, who had been scoliotic for twenty-seven years to such a degree that his trunk was shortened to one-half of its normal height. A gradually progressive paresis of the legs had deepened into complete paraplegia of six weeks' standing when Israel first saw him. The legs were wasted, motionless, with increased reflexes, but without contractures; the reaction to the induced current was diminished; sensibility was scarcely disturbed; the bladder and bowels were normal. The spinal curve in the dorsal region was to the right, and to the left in the lumbar. To the left of the first lumbar spine was a cold abscess as large as an apple, and upon pressure it seemed that its contents were forced into a prolongation of the abscess-cavity, towards the convexity of the right lower ribs.

The symptoms pointed clearly to some cause of circumscribed pressure on the motor portion of the cord. To what was this due? Evidently the lateral curvature could not be held responsible, for it had existed for twenty-seven years, and the paralysis was of but a few weeks' standing. There was no posterior curvature perceptible which could compress the cord. The abscess, and the pain on pressure, whether on the dorso-lumbar spine or on the twelfth rib, and the gradually produced paraplegia, convinced him that there was caries of the body of the vertebra, which had caused the abscess, and this, without any kyphosis, had produced the paraplegia by its localized pressure on the anterior part of the cord.

The tenderness on pressure on the right twelfth rib showed that the caries was probably on that side of the body of the last dorsal vertebra, and he determined to operate by resecting the posterior portion of this rib, which would give access to the focus of disease in the vertebra, all the more readily, of course, on account of the rotation of this vertebra strongly to the right. He first opened the abscess, next the sinus leading to the twelfth rib at its point of greatest convexity, whence it led directly inwards to the predicted spot. The rib was bare of periosteum, and carious. Resecting this, access was readily had to the vertebra, which had undergone cheesy metamorphosis and was already partly destroyed. By the sharp spoon the body of the vertebra was removed down to the canal. The moment this was opened, thick pus welled up from the canal, justifying his admirably logical diagnosis. Half of the body of the vertebra, and part of the right half of the arch, were removed, opening the canal to a large extent, and disclosing the cord forced to the left side, flattened, and of a green-gray color. Slight touch caused motion of both great toes. The operation was done antiseptically, and was followed by no reaction; indeed, the previous hectic fever subsided. The incision healed excellently, and was reduced to a very small linear wound, when, in the fifth week, his cough increased, and on the thirty-seventh day after the operation he died. The condition of the legs, the bladder, and the bowels remained unaltered to the end.

The autopsy showed right-sided pleurisy, originating from the carious twelfth rib, with a dry focus of carious degeneration in the lower lobe, surrounded by miliary tubercles.

Though the case terminated fatally, the autopsy showed clearly that it was in no wise due to the operation, but, on the contrary, that a much earlier operation would have given the patient a far better chance for life. If we may judge, at least from military surgery, which, so far, has afforded us our chief lessons in this respect, the uncovering of the spinal cord in a healthy subject is fraught with danger; but its exposure in cases of disease would seem to be far less dangerous, especially if the operation relieves the cord of any serious source of evil, as in the present case. That no febrile reaction

occurred, but that the fever was lessened; that the antiseptic spray produced no ill result on the cord (we presume it was used, though it is not specifically named), and that no ill effects followed the necessary mechanical disturbance of the cord as to its ordinary conditions of pressure, support, occlusion from the air, etc., are all circumstances worthy of notice. The paralysis, it is true, was not bettered, but this is not surprising in view of the late date of the operation, and we are justified in the hope of far better results in any future operations. Experience will teach us much. All operations undergo a process of evolution by natural selection and the survival of the fittest.

NERVE-STRETCHING FOR SCIATICA.

NERVE-STRETCHING by forced flexion of the thigh on the abdomen, under chloroform, as proposed by Billroth, Trombetta, and others, has suddenly become a popular expedient for sciatica. Blum has reported a large number of cases of neuralgia treated by nerve-stretching successfully. The subject has recently been discussed by the Paris Therapeutical Society, Dujardin-Beaumetz having given the history of two cases of sciatica treated by him in this way. In one of the two cases the disease had existed for two months only, and the success was complete. In the other case, which had existed for three years, and was probably complicated with tabes, there occurred notable amelioration, but not a cure, for the patient still experienced pain on moving the limb.

The discussion at the Therapeutical Society was interesting in that the opinion of members respecting the treatment best adapted to the cure of sciatica was brought out. M. Paul expressed a decided conviction of the utility of galvanism. He stated in this connection a fact not sufficiently known, that the best results are had from a large number of elements—from 40 to 60. M. Dally expressed himself strongly in favor of galvanization, and against the method of nerve-stretching. M. Moutard-Martin was sceptical in regard to the good effects of nerve-stretching; he has heard of unfavorable effects following the operation, and has known of a case of *tic douloureux* of the face, in which Blum stretched the fifth nerve without any advantage to the patient. As these are well-known names, their opinions are entitled to some consideration.

PAROTITIS.

MUMPS, as it prevails under the usual conditions, social and sanitary, does not possess a high degree of importance, even when metastasis to the testicle takes place. Under some circumstances it develops an intensity of action which is quite unknown to the ordinary course of the disease. During the civil war epidemics of mumps prevailed widely, and were very injurious in their immediate and remote effects. A more or less profound adynamia was induced by the seizures, and a severe and protracted anæmia followed. Intercurrent pleuritis, pneumonia, peri- and endocarditis, sometimes caused a fatal result. Indeed, mumps came to be very much dreaded, and had importance as a cause of invalidism only second to the measles. It was dreaded not only in respect to the immediate disabling effects, but also because of the profound alterations in the composition of the blood.

In a communication which appears in this issue, under the title "Metastasis in Parotitis," we have the record of a very interesting case. These details cast a much-needed illumination on an obscure subject in pathology. Beside the double parotitis and the double metastasis, an attack of acute rheumatism is intercalated, and subsequently thromboses occur in most of the superficial veins. These facts indicate the serious changes induced by the disease in the composition of the blood. Some germ is received in the mouth of a susceptible person, and finds its way to the parotid gland — its proper habitat. Installed here, it begins a process of development which greatly irritates the gland. Usually, the poison is eliminated, probably, in the parotid secretion, and beyond some slight sympathetic fever, there is no further trouble. Under some circumstances, it may be because of crowd poisoning, and bad hygiene, the poisonous germs are produced in such abundance that they pass into the blood, and cause the serious condition familiar to us in the army mumps. In the case narrated in the paper which appears in our present issue, there seems to have been an unusual susceptibility, for there were two distinct seizures and two metastases. The remarkable severity of the sequelæ is to be explained by the number and development of the germs gaining access to the blood.

There are no other examples of metastasis so complete and satisfactory as that of mumps. No adequate explanation of the phenomenon has thus far been given. It is more than ever difficult to understand the metastasis in such a case as the present one, for the extent to which the parotid was implicated excludes from consideration mere functional disturbances. The phenomenon of substitution may be invoked to explain metastasis of merely functional diseases, but here more profound changes render such a solution of the problem unsatisfactory.

THE MEDICAL NEWS COMMISSION ON THE SOURCES OF BOVINE VIRUS.

OUR readers, we hope, have attentively read the valuable report on vaccine farms just presented in our columns from the commission organized to secure the information. The position which the

MEDICAL NEWS takes on this subject has been set forth in various editorials. We hold that the original Jennerian lymph, properly cultivated, has lost none of its protective power, and that the vesicle of to-day does not differ in any respect from the typical forms of the vesicles and crusts of Jenner's time. Careless vaccination, and improper methods of storing and preserving lymph, have, however, led to the deterioration of much that is now available for the general use. THE MEDICAL NEWS, also, holds that vaccine lymph properly selected and of right descent, never communicates any malady but the vaccine disease, which runs its course without ever impairing the constitution in the smallest degree. We admit that humanized virus carelessly selected, and mixed with the blood and pathological fluids of a diseased, especially of a syphilized, subject, may communicate disease germs to the healthy; but this almost never occurs.

Owing to the possibility of deterioration of humanized lymph, and of its being the medium for conveying disease germs, we hold it to be wise—in the absence of a proper supply of the original Jennerian lymph—to return to the first source of supply, the bovine virus. It is, then, of the first consequence that the bovine lymph be of good quality. Profoundly sensible of the evil which may result from the general use of improperly prepared bovine lymph, our Commission has examined into the methods, and into the sanitary condition of the vaccine farms or establishments whose products are offered to the medical profession. Without expressing an opinion as to their relative merits, which would be invidious, we may at least indicate those points which characterize a proper establishment.

It should have the constant personal supervision of a competent physician.

It should be in the best possible sanitary state.

The heifers should be carefully selected in accordance with the best experience.

The original virus should be from spontaneous cow-pox. Retro-vaccination—that is, the inoculation of the heifer with humanized virus—is a questionable practice and should not be encouraged as a means of vaccine supply.

The lymph should be taken from the vesicle when mature, and without admixture with other fluids.

The lymph on quills or ivory points is preferable to the crust.

ACTION OF ALKALIES ON THE URINE.

IN an interesting work on the subject of the Morbid Conditions of the Urine dependent on Derangements of Digestion, noticed in our present issue, Dr. Ralfe has brought forward additional evidence to prove the difference in the effect of alkalies determined by the period of their administration. It is not sufficiently known that the changes in the urinary secretion effected by alkalies differ widely when administered before meals and during digestion. In 1850, Dr. Bence-Jones—a physician much in advance of his time, by the way—demonstrated that large doses of carbonate of ammonia greatly increased the acidity of the urine on the following day. Four years afterward, Beneke made the same observation for carbonate of soda, and subsequently Parkes demonstrated the same result from the administration of bicarbonate of potash. This fact might, indeed, have been supposed, *a priori*, from the laws of diffusion. When a quantity of alkali is administered before meals, the acid-forming constituents of the blood must diffuse into the gastric juice. An immense quantity of acid material must then, during digestion and at its close, diffuse again into the blood from the stomach, and be eliminated some hours hence by the kidneys.

Far different is the result when any considerable quantity of alkali is administered during digestion. The acid already produced is neutralized, and, for some hours subsequently, a more or less alkaline fluid diffuses into the blood, and is eliminated by the kidneys. The influence which these observations ought to have on the time for the administration of alkalies is obvious. That they are new, is not to be affirmed in view of the brief history given above, but that they are generally known, cannot be alleged.

Applying the same principles to the administration of acids, we obtain correct guidance. Given before meals, they check excessive production of acid gastric juice; given during digestion, they add to the acidity of the stomach, and, consequently, of the blood. That these principles are generally applied, our observation does not permit us to conclude. We have reason to believe that they have been fully described in lectures on therapeutics, delivered during successive years in this city.

THE ILLINOIS STATE BOARD OF HEALTH.

HOWEVER anxious we may be to contest the late assertion of an eminent orator and divine, that "Philadelphia is now east of the centre of American civilization," we can scarcely claim much longer that medical science forms an exception to the spirit of his dictum. Especially is this the case since the Illinois State Board of Health, in which is vested the sole power of granting certificates entitling physicians to practise within its limits, has adopted its present high grade of collegiate qualification. As a result of careful enquiries addressed to all the medical schools, and to many prominent practitioners of the United States, it has recently been resolved that after the usual session of 1882–83, no medical college shall be considered in good standing unless the following elevated requirements are enforced. In the

first place, a preliminary examination or its equivalent must be insisted upon; secondly, instruction must be given and examinations *passed*, not simply in the seven ordinary branches of medical education, but in the two additional and important subjects of Hygiene and of Medical Jurisprudence; thirdly, actual (not merely nominal) attendance must be enforced upon eight-tenths of the lectures, etc.; and fourthly, dissection must be practised during two courses, and hospital and clinical instruction attended for two terms during the three full years of study demanded. After next year, therefore, the graduates of medical colleges, whose curriculum does not attain the elevation of these advanced requirements, cannot practise in any part of Illinois on the strength of their diplomas merely, but must pass a special examination before the Board of Health, which will test their knowledge in accordance with its regulations. If this admirable new departure, which was unanimously agreed to in the Board, can be fully carried out, health and life will be better protected in Illinois against incompetent and designing pretenders to a knowledge of the healing art, than in any other State of the Union. We offer our best wishes for the success of so promising an undertaking, not only on account of the benefits which must accrue to the people among whom it is enforced, but also and especially for the sake of the excellent example it will offer to other communities suffering from the twin curses of medical quackery and ignorance.

AMONG the most extraordinary arguments brought forward in favor of the recent action of the New York State Medical Society, one advanced by the *Chicago Medical Review*, in its issue of May 1, is worthy of notice. If it were in the issue of *April* 1, we should regard it as one of those specimens of rollicking humor for which our Western journalism is so deservedly renowned; but, as it is, it "passeth all understanding." The *Review* calls attention to what it believes to be the important and hitherto neglected point that the new Code will have a tendency "to stop those sporadic conversions from medicine to homœopathy which are from time to time reported," and adds: "There are many regularly educated practitioners in the homœopathic ranks who have joined the homœopathists simply to secure large consultation practices, or for the temporary *éclat* which such conversion will give them." It then asserts that "nothing will be gained by such renegadism in the future;" it will cease; "the populace" will no longer be influenced by it; and for this blessed change it awards in advance to the Code all the honor and the glory.

If we thought this represented faithfully either the logic or the morality of our esteemed contemporary, we should be deeply grieved; but we feel confident that either the gentle spring-time or too much wisdom has had the usual baleful effect upon the editorial mind. Otherwise we should certainly never find the *Review* advocating such pernicious doctrine. That even for the sake of the effect on the "populace" the *Review* should desire to make concessions to those of our members who are ready, for certain inducements, to join the homœopathic ranks, we can hardly believe. To be sure, it paints those inducements in glowing colors. "Large consultation practices" in themselves are very magnetic, but when they are combined with "éclat," it requires the stoutest principles to withstand them. We fear the effect of this announcement upon the mind of youth, ardent and impressionable youth, which is surely to be found among the *Review's* subscribers, and we hasten to assure *our* readers that, so far as our observation has extended, only very moderate consultation practices have been acquired in this manner; the "éclat" has not been of a character or quantity to satisfy those who hunger and thirst after fame, and even the "populace" have sometimes, with their traditional fickleness, failed to be influenced—"The people's voice is odd!"

Apostasy has never been accounted a high road to success.

For ourselves we may add that to any who may contemplate the step thus portrayed by the *Review*, we shall be glad to apply the ancient injunction of hospitality and "speed the parting guest."

As the *Review* expresses a desire to know how THE MEDICAL NEWS arrived at the opinion that, "the physicians of the United States are all but unanimous in their opposition to the new doctrine," we may respectfully refer it to our news columns, which have for some weeks contained the opinions of the medical journals of the country, and the resolutions of the various State societies in reference to the question.

We regret that when it called attention to the *Record's* "claim," that it is endorsed in its course by "letters from all over the country," it did not manifest the same praise-worthy curiosity, as we could then have cordially united with it in again repeating our request for information, first made five weeks ago and yet remaining unanswered.

WE take pleasure in calling attention to the resolutions, on page 591, which Dr. E. R. Squibb gives notice he will present to the New York State Medical Society at its meeting in February next. Dr. Squibb publishes these resolutions now, in order that the views of the entire profession of the State, in reference to the New Code, may be fully and fairly ascertained.

SPECIAL ARTICLE.

THE MEDICAL NEWS COMMISSION

ON THE

MANAGEMENT OF VACCINE FARMS AND ON THE PROPAGATION OF BOVINE VIRUS.

(*Concluded from p. 550.*)

ADVANTAGES OF ANIMAL VACCINATION.

WE do not propose to consider here the comparative value of humanized and bovine lymph. It is enough to know that animal lymph is the progenitor of all vaccine virus, and, therefore, cannot be less protective against small-pox. There are only two advantages of animal vaccination to which we will refer: *First.* The confidence which is placed in animal lymph as being free from the slightest imputation of impurity, is calculated to minimize the opposition to vaccination. When an epidemic of small-pox is threatening, it has been found difficult, and even impossible in some places, to induce people to submit to general vaccination and re-vaccination with humanized virus. This was the case in Boston in 1872–3, when the municipal authorities found it quite important to pay, very much against their will, some $20,000 for animal virus, which was used with the greatest success, and to the freest acceptance of the citizens.

Second. In times of widespread epidemics, when people become thoroughly aroused to the importance of vaccination and revaccination, the supply of reliable humanized virus has been found less than the demand. Very great and numerous were the complaints from London a few years ago about the dearth of vaccine virus there. If the National Vaccine Institution of England, with all its excellent appointments for carrying on Jennerian vaccination, cannot meet the demand in times of small-pox excitement, how infinitely greater must be the paucity of virus at such times in those countries whose government takes no interest at all in the important matter of vaccination and vaccine supply! Now, one of the strongest arguments in favor of animal vaccination is that, by this means, virus sufficient to vaccinate whole communities can be furnished at very short notice. All that is needed to attain this end is that a sufficiently large number of animals be vaccinated. Hence, the supply of virus by animal vaccination need only be limited by the demand.

HOW THE STATE CAN ENCOURAGE AND PROTECT ANIMAL VACCINATION.

The cultivation of bovine lymph of the highest standard of excellence so directly concerns the public welfare that the State should feel called upon to support and protect this important interest. So far as we know, Belgium is the only country which has shown anything like a proper appreciation of this matter. Animal vaccination was introduced in Brussels by Dr. Warlomont in 1865, and has ever since been carried on under his skilful management very successfully. It was not long after its introduction before the value of bovine lymph was fully recognized by the profession, and the Council on Public Hygiene earnestly recommended the government "to favor, by all means in its power, the foundation of an establishment where the cow-pox could be propagated on heifers." After having thus been brought to the notice of the government, the Minister of the Interior of Belgium requested the Academy of Medicine to duly consider the question, and report to him its conclusions. Accordingly, a committee was appointed by the Academy, of which Dr. Vleminckx was chairman, and the following conclusions were submitted:

"The committee is of opinion that the following reply be sent to the Minister of the Interior: (1) The Academy has already recognized the utility, and even necessity, of renewing vaccine, and has not changed its opinion on this matter. (2) A really practical method of obtaining this renewal would consist in the extended application of animal vaccination, founded on the inoculation of spontaneous cow-pox upon heifers, on which the products of this inoculation should be unceasingly kept up by the processes recently introduced into science."

After consulting, also, some of the provincial councils of medicine, the government of Belgium created, in 1868, what is now called the "*Institut Vaccinal De L'Etat, A Bruxelles.*" It does not appear that the government has supplanted Dr. Warlomont, and established an institution of its own, but rather that Dr. Warlomont's interest in the material produced is allowed to continue; the government simply gives to the institution protection and patronage, and grants a moderate annual subsidy to Dr. Warlomont for certain services rendered to the public.

As showing the general confidence which is given to the virus from this institution, Warlomont says that, as early as 1873, of the one thousand physicians practising vaccination in Belgium, seven hundred and sixty-eight have obtained points from this source. Also, in a letter to Dr. Martin, he states that the day previous to writing the Queen of England and several of her family were revaccinated from his institution.

Concerning the prophylactic power of this virus, Warlomont remarks:

"Out of more than ten thousand children vaccinated at Brussels with animal vaccine, from 1869 to 1870, not one case was, to my knowledge, noted as having been attacked by the epidemic which terrified the world in 1870 and 1871. The same immunity was shared by our revaccinated cases, which, though not nearly so numerous, were, at the same time, in the foci of the epidemic."

By reference to the mortuary tables published in the *National Board of Health Bulletin*, we find that during the last two and a half years, only fifty-five deaths from small-pox have occurred in Brussels, which has a population of over 400,000; and there has been this comparative exemption from the disease in Brussels, notwithstanding that within the same period an epidemic of considerable magnitude has prevailed at Antwerp, only thirty miles distant.

All that Belgium has done for animal vaccination in that country, might be done here by each of our State governments. If each State were to create a vaccinal institution, place it under the charge of the State Board of Health, with full power and ample means to carry it on efficiently, we might then be

able to obtain, at all times, reliable, safe, and trustworthy bovine virus. The subject is one of such momentous importance to the public, that it is certainly worthy of profound attention.

We will conclude the subject of our investigation by saying we are fully convinced that the propagation of animal virus is a service requiring very exact management, and should be committed to no hands but intelligent and conscientious physicians. The production of pure and reliable bovine lymph is a matter of such infinite value to humanity, that the State should surround this very delicate work by its strong arm, and guard it well by some wisely constructed law. But in the absence of any such protection, medical men themselves can do very much for the cause of true animal vaccination by patronizing only those physicians who are worthily devoting themselves to the specialty.

REVIEWS.

ON THE MORBID CONDITIONS OF THE URINE DEPENDENT UPON DERANGEMENTS OF DIGESTION. By CHARLES HENRY RALFE, M.A., M.D., Caius College, Cambridge, F.R.C.P., etc. Pp. 148. London: J. & A. Churchill, 1882.

THIS is a valuable and suggestive monograph on the subjects embraced in the above title. It contains chapters on the following:

Formation and removal of acid from the body; Dyspepsia associated with an acid condition of the urine; Dyspepsia associated with an alkaline condition of the urine; Derangements associated with deposits of uric acid (relationship of lithæmia and gout); Derangements associated with deposits of oxalate of lime; Derangements associated with excessive elimination of phosphoric acid, and an appendix, effect of bicarbonate of potash on the acidity of the urine. All of these topics are treated in a fresh and interesting manner. Especially valuable is the exhaustive treatment of the subject of uric acid, the importance of which as a factor in pathological processes, the author of this work holds to be much less than is commonly supposed.

CHRONIC BRONCHITIS—ITS FORMS AND TREATMENT. By J. MILNER FOTHERGILL, M.D., Edin., etc. Pp. 160. New York: G. P. Putnam's Sons, 1882.

ANOTHER book from the fertile and graceful pen of Dr. Fothergill. It "is intended for practitioners, and especialiy those who are commencing practice." As ready as Dr. Fothergill is, he had some trouble to make a *book* out of his materials. He brings in not a little of extraneous matter, which is always well, even picturesquely said, but it is not what the buyer of the book pays for. In the Introduction he describes "the old peasant, bent with toil and lumbago," "the old dame who sat by her fireside, her favorite cat sleeping cosily at her feet," etc., the "quiet country landowner, a 'laird,' but scarcely a squire." He tells us also how "on a wet day, and when time hung heavy, it was customary to set to work after breakfast and replenish the large bottles of cough-pills, against the requirements of the coming winter." It is in this fashion he introduces the subject of chronic bronchitis. Such were the types of cases met with in Westmoreland, and with which his earliest experience was concerned as a pupil and associate of his father, a general practitioner of that region.

Under the term chronic bronchitis he includes the cirrhotic form (by which he certainly intends *sclerotic*), which is chronic interstitial pneumonia; the emphysematous form—one form of emphysema; the degenerative form, which is senile bronchitis; and the mitral form, which is really the result of a mechanical stasis. By bringing in so many morbid processes, he manages to eke out his book to the proper dimensions. Under one term he lugs in substantive bronchitis, and a number of conditions of which bronchitis is a mere symptom. The descriptions are sketchy, superficial, and sensational, although much useful information is conveyed.

Dr. Fothergill is a polypharmacist. His prescriptions are composed of many ingredients—one, usually, for every prominent symptom. "The ordinary prescription for chronic bronchitis, especially with emphysema, in use with me, at the Victoria Park Chest Hospital, is:

Amm. carb.,	gr. v.
Tinc. nucis vom.,	♏x.
Tinct. scillæ,	ʒss.
Inf. serpentariæ,	ʒj.

Ter in die.

And a very serviceable mixture it is." Somewhat more than two tablespoonfuls at a dose, is his conception of an agreeable quantity, and to this he sometimes adds ten drops of tincture of digitalis, and then "the combination is very satisfactory," he informs us (p. 122). The following is, in his opinion, the most elegant and palatable cough mixture ever prescribed:

Syrp. scillæ,	ʒj.
Acid hydrobrom.,	ʒss.
Sp. chloroformi,	ʒss.
Aq.,	ʒj.

The above is a verbatim transcript of the perscription as given in the book, p. 122.

As a further exhibition of some remarkable therapeutical notions, we quote: "When the temperature oscillates daily, and the temperature chart shows diurnal peaks, then it is well to give this combination:

Quiniæ sulph.,	gr. ij.
Ac. phosph. dil.,	♏xv.
Tinct. digitalis,	♏x.
Inf. gent.,	ʒj.

Ter in die.,

which will often shave down the peaks in a very satisfactory manner."

Dr. Fothergill, it is evident, is a very eccentric man.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting May 18, 1882.

FORDYCE BARKER, M.D., PRESIDENT, IN THE CHAIR.

AFTER the reading of the minutes of the previous meeting, DR. LEWIS A. SAYRE, in a few well-chosen words, referred to the character, scientific attainments, and life-work of the lately deceased Fellow of the Academy, DR. JAMES R. WOOD.

Dr. Sayre then presented the following resolutions in the name of his friend and colleague, Dr. William H. Van Buren:

Whereas, It has pleased Almighty God to remove from his place amongst us our associate, James R. Wood, M.D., it behooves us to express the regret we feel at our loss, and to place on record our high estimation of his many good qualities. It is, therefore,

Resolved, That in our late friend and Fellow we recognize the possession of exceptional energy and courage, which manifested themselves throughout his

life in unceasing devotion to the interests of the sick and suffering, and especially to the interests of the sick and suffering poor, amongst whom his efforts in their behalf are preserved in grateful remembrance.

Resolved, That, in view of the great loss they have sustained, we tender our sympathies to the numerous pupils of our lamented associate in all parts of our country, for to them and their interests he most faithfully devoted himself throughout his professional life, and by their grateful affection his reputation will be most honorably preserved and sustained.

Resolved, That in our late associate we recognize a citizen of large public spirit, who was always ready, by word and deed, to lend his aid to all measures designed for the public good, whether in time of pestilence or war.

Resolved, That we respectfully tender our sympathies to the family and immediate friends of our deceased member, assuring them that we shall not soon cease to regret his absence from his accustomed place amongst us.

DR. WILLARD PARKER seconded the resolutions, and added a few personal reminiscences, stating that it was now more than forty years since he made the acquaintance of Dr. Wood. Dr. Wood was, he said, one of the most active men he ever knew in or out of the profession. The achievements of his life finely illustrated what a man could do by singleness of purpose. He detailed the valuable service rendered by Dr. Wood in securing the passage of the law legalizing dissections of the human body, and the development of Bellevue Hospital.

Dr. Detmold and the President made some further remarks relative to the great value and practical nature of Dr. Wood's labors in medical science.

The scientific work of the evening consisted of some *Remarks on Lithotrity, with Evacuation*, by DR. HENRY J. BIGELOW, of Boston. Dr. Bigelow spoke extemporaneously, and illustrated each point with instruments and blackboard drawings. When, he said, your distinguished President was kind enough to ask me to make some remarks upon this subject, I felt that it had become altogether so old and so familiar to most of the gentlemen that it could offer little of interest. It was only at a subsequent time, when he was kind enough to ask me, that I felt it was due to the subject to give it the advantage of some discussion in the light of the experience of New York surgeons.

I could not forget, either, that it was in New York that the subject received its first distinct appreciation in the way of practical experiments and in print, at a time when it needed friends. I would especially mention the name of Dr. Van Buren in this relation.

The subject, as you know, is a purely surgical one, and even in its modern light or phase, something more limited than that—it is almost mechanical. What has been done of late years in this direction deals with operative surgery. In thinking over what might possibly be acceptable to those gentlemen interested in this topic, it occurred to me that as pure mechanics was the branch which had modified lithotrity, the consideration of this part of the subject would be of most interest.

I do not think we have changed our views in regard to the pathology, but the operation is quite different from that formerly in vogue, and changes are still being made. There are one or two points in connection with these changes that I have been especially desirous of bringing before some of the gentlemen present.

The part of the subject of which I will speak is purely operative; it deals with physics, perhaps more so than almost any other subject in surgery. Accidentally, the new instrument which has changed our views in regard to the tolerance of the bladder, has to do with air, water, and solids. Any of the old instruments for breaking stone will answer the purpose, and it becomes a matter of convenience what instrument will do best. Although, in 1878, at a discussion in London, upon lithotrity, it was stated by Sir James Paget and others, that the subject had probably been developed as far as it could be and no further improvments were likely to be made in the instruments used, or the operation; yet curiously enough the instruments have been materially modified. So, though the operation can be performed with the original instrument, it can be done much better with those we have now, and, as a matter of convenience, I think it is best to use them.

The whole subject is embraced in breaking a stone and getting it out of the bladder. This was done many years ago. For about half a dozen years the breaking was done in two to seven minutes. A good while ago the operation occupied a longer time. When Civiale began, he sometimes took half an hour, but when he improved the instruments he reduced the time of sitting to three or four minutes, and since then that has been the rule. It was now thought desirable, because of certain accidents happening, to get rid of the fragments immediately after crushing. It so happened that when we could get the stone entirely out of the bladder these accidents did not so frequently happen. In short, the inflammation seemed to be due to the fragments left in the bladder, and not to the instrumentation. The reason why these fragments were not gotten rid of was because the means did not exist for removing them. When they came to be removed by modified instruments, the bladder was found to be tolerant, and the abstract discovery which forced itself upon us was the tolerance of the bladder, which, curiously enough, had not been suspected. Believing the bladder not to be tolerant, and accidentally finding out the exact opposite to be true, is one of the kind of errors which lead us to doubt everything. It was the small catheter of Clover's instrument that had retarded progress.

In 1846 Sir Philip Crampton took out one hundred and twenty grains of stone by vacuum. If we would reduce all stone to powder, evacuation would be effected through a No. 21 catheter, French, but this would entail suffering to the patient and inconvenience. In the original Clover instrument, familiar to all lithotritists, the vacuum was produced by means of a rubber bag. The only thing which can in any sense be called new is the use of No. 25 or 26 catheters (French) up to No. 31. And even a large catheter had been used in former times. The instrument of Collan, which I think was made for Nélaton, had a French catheter of No. 25 or 26, but it did not work. It was clumsy, and, for various other reasons, inefficient.

The novelty of our present instruments consists in the combination of a large catheter with efficient suction. If a large catheter had been used with Clover's instrument it would have emptied the bladder. In Clover's instrument the suction is not sufficient, because it cannot lift a column of water the height of the catheter. The bag should be stronger. In regard to a straight or curved catheter, I personally prefer a straight one. I think it is easier of introduction. However, it is largely a matter of individual preference which is used. In making the orifice of the catheter two things are to be considered: ease of introduction, and keeping away the walls of the bladder. For this purpose a projecting lip is wanted. The opening should not be too large, otherwise it will invite larger fragments than can pass through the catheter. At the orifice the wall of the tube should be thickened so as not to cut the canal as it passes.

The next point is the important matter of obtaining a fragment when it gets out of the bladder. If a fragment comes almost to the end of the catheter, it goes back into the bladder. If it comes a little further, it seems as if the surgeon ought to have the means of

catching it and preventing its return. Yet, up to this time, all evacuators return to the bladder from a third to a half of what they take out. For a time this was supposed to be due to a long tube, but the fact is, the fragments are returned from the bulb. I have tried in various ways to devise a trap at the head of the tube which would catch and prevent the return of these fragments. To this end I had constructed a little glass cylinder containing a valve and rubber ball, which is intended to play backward and forward each stroke. In aspiration, this ball rises and admits the fragments, and then falls against the end of the tube. The tube is perforated at the sides near the end, so as to admit of the return of the water to the bladder. Another arrangement consists of a little cotton rag attached to the end of the tube in the form of a sleeve. Both of these arrangements work very well, but are a little complicated, and are apt to clog. I have tried all varieties of valves, and think that no metal valve will work satisfactorily, even when the hinges are made upon pallets, for they will become clogged. Hence we are obliged to resort to other expedients, which we will consider later.

I wish now to speak of the evacuator. As I have already said, it has to deal with air, water, and fragments; and, curiously enough, it is very difficult to make all these do what you want. You make your evacuator work, and it is inconvenient; you make it convenient, and it won't work. There are several points to be taken into account. You can either place your receptacle for the fragments between the catheter and the bulb, or place it in the bulb. Suppose we have the original instrument of Clover; a receptacle can be placed between the glass tube at the head of the catheter. This works well, but it is difficult to get the fragments out; and with any such arrangement outside, it is found in operating that the instrument is a little difficult of handling. If the fragments are allowed to go into the bulb and drop, this shortens the bulb from end to end, which is a very important matter. Again it is very desirable to place the axis of the bulb in a line with the axis of the catheter. If you place it above, you are acting at a great disadvantage; there is a leverage which you don't have when the handle is in a line with the catheter. Having disposed of this, it becomes a question how you will attach the catheter; whether or not you will attach a piece of rubber tube to the end of the catheter, between it and the bulb, so as to allow the weight of the bulb to be supported by a stand. My prejudices have always been in favor of a stand, but I find that nowhere do operators use a stand. This rubber or elastic tube can be made in various ways. If straight, it is liable to bend upon itself in such a way as to obstruct the flow of the stream. If made curved, it does not double upon itself. It is no sort of matter where the catheter, or tube connected with it, enters the bulb, provided it brings up somewhere below the top, so as to make an air chamber. Whenever the tube is not prolonged so as to project into the bulb, a defective instrument results, for no air chamber is obtained.

This brings me to the point of showing how regurgitation takes place. By introducing a piece of glass tube between the catheter and bulb in the ordinary instrument, when I aspirate you will see the fragments pass up the tube and rise in the bulb, but instead of being deposited in the receptacle the fragments pass back into the bladder. The overcoming of this difficulty underlies the making of an efficient evacuator. Some of the fragments will return unless prevented by a strainer. One of the difficulties has been that bulbs have not been made stiff enough. The suction has not been sufficient to raise the fragments entirely out of the catheter. Another difficulty has been the regulation of the amount of water in the instrument and the bladder. To accomplish this, I have had attached to my bulb a rubber tube, the free end of which is placed in a tank of water. The tube is provided with appropriate cocks, and the regulation of the amount of water and air present becomes a simple matter. This I consider very important, for bladders are not all of the same size and they are not all equally distensible. In a small bladder it is sometimes difficult to get the "biting" sensation, a sensation very like the nibbling of a fish at the hook. This indicates that not enough water is present in the bladder. All that is necessary to supply the deficiency is to open the cock of the supply tube connected with the water tank and allow the water to flow into the bulb. The tunnel with which some instruments are provided will answer the same purpose. But suppose the reverse of this is true; there is more water present than is wanted. The tunnel will not serve as a means of getting rid of the water. Without the hose, it is necessary to detach the instrument, pour out an indefinite quantity of water and replace it. But with the hose you can much more conveniently accomplish the same thing, and furthermore can graduate the amount of water to within half a drachm. If the bladder is a little lax, you have only to open the cock and admit a little water. On the other hand, if the patient suddenly strains as in vomiting and the bladder becomes unduly tense, you can open both cocks, the one at the head of the catheter and that of the hose, and thus obtain free exit of any amount of water. As soon as the patient ceases to strain, the water flows back into the bladder of its own accord. So, I believe the hose pipe a valuable addition, and I should not know how to work without it.

I will now show you the instrument I have finally settled down upon as being the best. Its form, as you see, is that which most conveniently rests within the concavity of the hand, being spherical. It is very short from end to end. Regurgitation of fragments in the bulb is prevented. The obliquity of the tube carries the receptacle high in the air, which is much better than having it between the patient's thighs. I prefer two stop-cocks; a bulb or tunnel can be attached at pleasure. Strainers become clogged; especially is this the case when you have an inflamed bladder; they become clogged with fibrin, and it is necessary to remove them, brush, and restore them to position. This difficulty is met in the following simple way: The sides of the projecting tube are perforated all around, so that the sum of the small perforations is greater than that of the opening in the end of the tube. The momentum given to the fragments brings them well out of the catheter into the bulb, but there is no such force to return them through the opening in the end of the catheter, for the water seeks its return through the smaller openings which do not admit the fragments. The practical working of this instrument is most satisfactory; it prevents the return of fragments to the bladder.

Dr. Bigelow made a few remarks on lithotrites; the most convenient instrument he said, was that which was best adapted to the movements of the hand, abstractly considered. This he considered to be twisting or rotation, and so constructed his instrument in accordance with this idea. He did not lay particular stress upon the use of any one instrument.

Drs. Keyes, Weir, Gouley, Otis, Sands, Sayre, Detmold, and Parker, participated in the discussion which followed the reading of the paper.

WEST PHILADELPHIA MEDICAL SOCIETY.

Stated Meeting, May 1, 1882.

S. S. STRYKER, M.D., PRESIDENT, IN THE CHAIR.

A Case of Hydrophobia.—DR. CHARLES W. DULLES, in presenting the following report, said that cases of

hydrophobia are so rare that it has seemed to him worth while to record one which came under his observation a few months ago.

C. H., aged nearly sixteen years, of a nervous temperament, with a spare, but well-knit frame, being in perfect health, was bitten on the anterior surface of the end of his right ring-finger, on January 11, 1882, by a young coach-dog, with which he was playing. The dog had, it is said, been sick for a few days and had quarrelled with other dogs for a day or two, one of these quarrels being conducted through a hole in a fence, partly stopped with a piece of tin, the dog's lip was cut by this tin. This was the day before C. H. was bitten. The wound in the boy's finger was about an inch long. It was made while the dog was springing up at his hand, held above him in sport.

The wound was at once filled with common salt, and the boy hurried to a drug-store near by, where, within a few minutes after its receipt, the wound was deeply cauterized with the solid stick of nitrate of silver. After this it healed up without apparent inflammation.

The dog, on the day before—some say the same day—bit another dog, which was kept under observation, and lived and was well for two months, when it died one night in its kennel at the age of sixteen years. The dog that did the biting was shot the same day on which it occurred.

Although C. H.'s father asserts positively that the boy gave no indication of fear of hydrophobia, it is noteworthy that the boys who were his companions told him he would "*go mad*," and his fears of hydrophobia were so much excited that his father was led to take him to a small town where a man dispensed a "sure cure" for bites of mad dogs. This was a decoction which, taken in three doses of a pint each, purged the boy well. After this, the neighbors say, the boy continued to express fears of having hydrophobia, which were increased by newspaper accounts of a case which came in his way.

However, on February 6, twenty-six days after he was bitten, he became low spirited, had malaise, complained of slight chilliness, and some twitching of the right arm. This was, by his father, attributed to a cold, and he was given a light dose of salts, and his feet were bathed in mustard-water. His indisposition, however, continued.

The next day he had no appetite, and ate for breakfast only a few crackers. At noon, a homœopathic practitioner was called, who left a powder, which was put in water, and a teaspoonful of the solution given every two hours. The boy now had considerable nervous excitement. He lay on a lounge most of the day, and did not go to bed till evening. During the night he became worse, and was seen at 9.30 P.M. by the same practitioner, who left two powders. Both were taken, but seemed to do no good.

Sometime before nine o'clock in the morning of February 8, this doctor came again, mixed some medicine in water, "to quiet his nerves," and ordered a teaspoonful to be taken every two hours. This the patient, it is said, could not, and certainly did not, take. According to his father's account, any attempt at taking water excited horror in his mind, and he snapped at everything that came near him.

At this juncture a messenger informed the homœopathic practitioner that his services were no longer needed. He yielded up the case with apparent willingness, and the messenger came and asked me to take charge of it.

I went, reaching the patient a few minutes after nine o'clock in the morning. When I first saw him, the tableau was a horrible one. The room was partly darkened and in great confusion, the bed was disordered, the covers tangled about the young man's legs. His underclothing was soaked with perspiration, saliva and vomited mucus. He himself was a frightful object, held as firmly as possible by three men—one of them his father—of whom two held his arms and one held down his legs with a loose straw mattress. Nevertheless, they all could not prevent him from incessantly springing forward into a sitting posture, or tossing himself from side to side in bed. The bed covers, and even the mattress, were in great confusion and smeared with viscid saliva and vomit. He was constantly hawking and spitting up tough, whitish saliva. This he spit out in whatever direction his mouth happened to point, striking the bed, the floor, or his keepers, without discrimination. He cried out from time to time in a howling, demoniacal fashion; again he complained of thirst, saying he had not drank anything for five days. He grasped at his throat, and said he was choking. At times he grinned horribly. His eyes were staring, the pupils enlarged to their utmost extent, the iris a mere line around them. His face was bathed with clammy sweat, his body and underclothes drenched. His surface was cold; his face was very pale and livid; his hands were of a dusky, congested red; his legs slightly dusky; his pulse was about 160, not to be counted, and scarcely to be felt at all in the radial arteries; his heart was acting violently and tumultuously, with some muffling of both the systolic and diastolic sounds.

His mind was at times perfectly clear, at others he rambled, and at others still he shouted in delirium. He had been retching and vomiting violently, and rejecting everything that went into his stomach, which rumbled horribly. The first thing I did was to find, and to show his attendants, that scarcely any force was required to control his movements. I spoke to him encouragingly and firmly; and, assuring him that he would feel better if his stomach were not so empty, I had some milk brought, and gave him, with a teaspoon, about a third of a teacupful. Each swallow was taken with great difficulty, and only after a hard struggle, and in a few minutes he vomited again. Not long after, his ejections were mingled with matter which I took to be blood, caused by capillary hemorrhage as a consequence of his very violent retching. (Microscopic examination showed this to be only biliary matter, and not blood.) I now gave him two parvules of morphia, each containing an eighth of a grain. Soon after taking these he vomited. I next dropped a quarter of a grain, in powder, upon his tongue, and soon after I gave another equal quantity hypodermically.

These produced no effect upon his pupils, but after receiving them he was less agitated and more rational. He now took some more milk, which stayed in his stomach. Occasionally, at his own suggestion, he sat up and took this from a cup, which he held to his mouth with both hands, trembling violently. When one swallow reached his fauces he would give a cry, thrust the cup violently from him, and dash himself back upon his pillows. He was also given whiskey and hot water, which he retained.

He complained only at times (not invariably) of the opening and shutting of the door of his room. But the least breath of air—even that caused by people speaking to him—was a constant cause of complaint, and an unfailing occasion of a clonic spasm. At no time, while I saw him, did he have a tonic spasm. Just before noon he began to imitate barking. He seemed to be thinking, and then uttered the syllable "Bow"—followed after a short interval by another, and then another after a shorter interval. This was not a sound at all like the barking of a dog, but a plain and, I thought, tentative imitation. The boy seemed to be observing himself, and not to be sure whether he ought to do this or not. When I charged him to stop, he desisted entirely. Just after noon he took some

boiled rice with sweetened milk; of this he seemed quite proud when I next saw him, and expressed some hope that he would pull through yet. He frequently protested that he was doing all he could to restrain himself, and promised to do his best still.

At about 2 P. M. Dr. Charles K. Mills saw him with me. At this time he was more calm than he had been, listened attentively, and replied perfectly rationally to all that was said to him. Dr. Mills charged him to stop spitting, and when it was put on the ground that swallowing his saliva would do him good, he did stop spitting almost entirely. He also now expressed a desire to urinate, and did so upon a towel, to his evident satisfaction.

His pulse was at this time almost undiscoverable at the wrists; his hands were cold and cyanotic, as were his penis and scrotum. His legs were not very cold, but they were dusky. He was now given (at 2.15 P.M.) a half a grain of morphia hypodermically over the sternum, and half a teacupful of a mixture of equal parts of milk and whiskey; he also ate a little milk toast. An hour and a half later (3.45 P. M.) I found him calmer, with pupils less dilated, the iris being plainly seen. I now gave him a teaspoonful of tincture of digitalis, and nearly a teaspoonful of aromatic spirits of ammonia, by the mouth.

Half an hour later he was carried into an adjoining room, which was more spacious and better ventilated than the one in which he had been lying. I, myself, supported his shoulders and head. While being carried he held himself perfectly rigid. As soon as he was laid in the new bed he flung himself violently over on his face, and vomited some glairy, grumous mucus, mixed with bile. When he was quieter I gave him another hypodermic injection over the right chest-wall, consisting of half a grain of morphia, dissolved in thirty minims of tincture of digitalis, and soon after left him.

After this, I am told, he complained of the noises of the street, became restless again, flung himself about in his bed, and two men who were watching him exerted considerable force to keep him still. He demanded to be moved into a third room down-stairs and was impatient when this was refused. About half-past five he had some new struggles, and then, his father says, "his eyes became fixed," and, at twenty minutes before six o'clock, he quietly died.

I called to see him by appointment at 8 P.M., and found that death had taken place. His body was still warm, his face very pale, his eyelids open, his pupils dilated.

I endeavored to secure a post-mortem examination, but this was not permitted.

After the experience furnished by the case just narrated, I have made some researches in regard to hydrophobia, with the hope that they would furnish me with tests by which I could satisfactorily decide for myself the question whether it was a case of true hydrophobia or not. But in this I have been disappointed. I am not yet able to express any positive conviction. On looking over the notes made at the time of its occurrence, and comparing them with those of the many cases of others which I have examined, I find that they present a no less complete picture of this disorder as it is described by authors.

And yet, when I stood by the boy's side, I felt convinced that this was a case of purely psychical disorder. I have seen and there are abundant records of phenomena similar to some of those here presented, in cases of great nervous excitation, in grave hysteria, and in the nocturnal frights of nervous children. Further, the theory of hydrophobia held by all who believe in it at all, is that it is due to the activity of a special poison, and yet in my case—as, indeed, in most cases—there were intervals of lucidity and self-control which were so complete that I could hardly suppose there was here a disease like any other contagious or infectious disease.

In fact I have found myself unable to decide definitely as to the nature of the case. So, I put it on record for the benefit of others, with a title which will identify it as belonging to a class that has not such unmistakable characteristics as to make it easy to separate in it the true from the simulating.

In concluding, I would call attention to the fact that the study of this subject is made much more difficult than it would otherwise be because of the carelessly observed and inaccurately reported cases with which its literature is crowded. Many reporters do not seem to have suspected that the disease is simulated by inflammations (especially chronic) of the brain, by epilepsy, by hysteria, by delirium tremens, by acute mania, by simple anginas (in children), by reflex irritations of the nervous system, and by the effects of fright alone.

This should be always borne in mind, and never overlooked, when, as is usual, one is surprised with a case of so-called hydrophobia.

It is well not to forget, also, that some careful and critical investigators have concluded, not only that almost all cases of so-called hydrophobia are spurious, but even that there is no such specific disease at all; that the relation of the disorder to the bite of an animal is simply a *post hoc*, not a *propter hoc*.

This leaves, it will be seen, a good deal of room for keen scrutiny of all cases that arise, and justifies considerable scepticism in regard to very many already on record.

On the other hand, some of the ablest writers upon this subject, knowing the grounds for the scepticism of others, believe all that these preceding sentences deny or put as doubtful. The study of hydrophobia has been pushed with such diligence and such refinement of observation and of generalization that there lacks no feature of the picture set up by its investigators, from the discovery of the very *contagium vivum* which initiates it to the description of the microscopical lesions of the brain and nerves which are its final expression.

Such being the case, there is need for most careful and minute observation and recording of the phenomena any case may present, and their estimation without too easy credulity or too hard scepticism.

As to the treatment of hydrophobia, there is little to say—nothing is of any real avail against the true disease. Cures have been claimed by innumerable methods; most recently by the administration of curare or the inhalation of oxygen. Neither can be relied on. The former is dangerous, and has doubtless hastened death in some cases. The latter is probably merely a sufficient distraction to quiet an imaginative and lyssophobic patient, although it may tend to counteract the effect of the disturbance of respiration which is often present. Hypnotics and anæsthetics have utterly failed to cure hydrophobia; and one might as well give a *placebo* and await developments to torment himself with the struggle to find some means of relieving his patient, were it not for the fact that there are constantly occurring spurious cases, and that some of these are, by active treatment, rescued from the death which their fears would bring to pass. For such, I think the inhalation of oxygen should be first used, if it can be, and then that of chloroform or ether, conjoined with the hypodermic injection of a moderate dose of morphia. I say moderate, for the large doses that have been given have never saved life, and it may be they have helped to sacrifice it.

If this be joined to firm moral and mental support, all will be done which I believe can be done. There is rarely any necessity for physical restraint of the

patient and there need be no fear, for there is absolutely no danger, of the disease being communicated to another human being. This has never happened.

DR. HARRISON ALLEN gave the following brief account of a case of hydrophobia recently under his observation:

In the latter part of December, 1881, I was called to see a young man, by occupation a bank messenger, 21 years old, who had been complaining for about 24 hours of an indisposition as to whose nature there was no particular clue. When questioned as to what the matter was, he took a deep inspiration, and, speaking with a peculiar explosive, expiratory effort, simply answered, "I'm very nervous," which was the sum total of his description of his difficulty.

Something in the appearance of the patient caused the suspicion that the case might be one of hydrophobia, and I accordingly asked that a glass of water might be given him. He attempted to drink, but the fluid seemed to be arrested in his throat as if by a constriction. Some of it, indeed, apparently entered the œsophagus, but the larger quantity was blown with considerable force from the mouth.

Inquiry made at the bank where the patient was employed developed the fact that three and a half years before a strange dog had run into the building, and upon an attempt on the part of my patient to caress him snapped and bit the lad on the right thumb. Nothing further was known of the history of the animal. It could not be learned that the wound had ever been cauterized, the case having been treated at a neighboring drug store and afterward at a dispensary. The patient had never been told that the dog was mad, nor had he seemed to suspect it himself.

Dr. H. C. Wood saw the case in consultation. We could discover no element of fright, and our suspicions as to its nature were carefully concealed, even from the mother, until duty compelled us to mention them to her. She was cautioned that she must on no account suggest them to her son.

As the case developed, no violent symptoms whatever were presented, and at no time was it necessary to forcibly restrain the patient.

The treatment consisted in the use of opiates and chloral. One-sixtieth of a grain of eserine was twice injected hypodermically. The duration of the case was 48 hours. Four or five hours before death the patient had marked hallucinations, followed by stupor with slow, heavy breathing. From this condition he would gradually rouse, becoming apparently quite himself and able to recognize those about him, but the hallucinations would soon recur. The Cheyne-Stokes respiration was well developed toward the close. He died quietly, with neither hallucinations nor any semblance of convulsion.

An autopsy was obtained, the medulla oblongata removed, and now is in the hands of Dr. Wood.

DR. C. K. MILLS, who was present by invitation, expressed his views in regard to hydrophobia. He doubted that there was any such real disease as hydrophobia in man. He had seen three cases so named, and had made a post-mortem examination of a fourth. On two cases he had also made microscopical investigations. He could not, of course, assert positively that there was no such disease as hydrophobia in man; but was prepared to say that he believed all the cases so called could be explained on some other hypothesis, such as that of lyssophobia, tetanus, chronic or acute nerve lesions, extravasations, etc. Of the cases in which he had made post-mortem examinations, he had found in one evidences of chronic cervical pachymeningitis, and in two only such lesions in the floor of the fourth ventricle as are common to all spasmodic affections.

There are many cases of spurious hydrophobia. Many die who have been bitten by dogs not mad; and many bitten by mad dogs do not have hydrophobia. The theory that hydrophobia is due to a virus locked up for months and years in a scar on the finger, did not appear to him rational.

DR. H. F. FORMAD referred to the artificial production of hydrophobia in animals. He had been experimenting by injecting cantharides into the livers of dogs. in order to produce abscesses. Out of twelve dogs so treated, four had symptoms similar to those of hydrophobia. This was so striking that he did not kill them, but penned them up, and saw that they had all the symptoms of hydrophobia. On making autopsies, he could not find any lesions visible to the naked eye.

He experimented with the saliva of these dogs, injecting it under the skin of another; but he did not get any symptoms of hydrophobia. The dog died of cellulitis and septicæmia, as has been observed in Pasteur's experiments with human saliva.

Dr. Sternberg, of the U. S. Army, made recently some experiments, by injecting saliva under the skin of dogs, in the pathological laboratory of the University of Pennsylvania, and concluded that the poisonous effects were produced only by the saliva of persons who did not smoke, or who lived in hot climates. "But," said Dr. Formad, "I am an inveterate smoker, and my saliva killed as promptly as any one's." A student of mine, Mr. Claxton, made a number of experiments, and could not corroborate some of Dr. Sternberg's conclusions. On the contrary, he found that any saliva, even that of animals, promptly killed those experimented upon.

DR. J. H. LLOYD mentioned the case of a young man who had an attack of dread of water, after a dog bite, to whom a physician whom he knew gave medicine and got the ascendancy over his fears. This he regarded as a clear case of lyssophobia.

A lady of his acquaintance, he said, had such a dread of dogs that she has been known to hang away clothes for a long time, because she had passed a dog when wearing them. She is now at her climacteric, and of a hysterical temperament. If she were to be bitten by a dog, there can be little doubt she would have hydrophobia.

DR. M. B. MUSSER had attended a child, four or five years old, which had been bitten in the face by a dog, the wound healing kindly. One month later the child had an attack like meningitis, twitching of the neck, difficult deglutition, but no opisthotonos. It died in coma, after four or five days. The question of hydrophobia was raised, but he gave a certificate of death from meningitis.

As illustrating the effect of mental impressions, he told of an old lady who had one dog, and opposed her husband's getting another. This he, however, did without her knowledge, and one day the new dog got up to her room and jumped upon her bed, frightening her into violent hysterical screams. This was due not to a fear of dogs, but to an aversion to any other than the one she already had.

DR. S. R. SKILLERN said, "The only case I ever saw was that of a boy ten years old, bitten by a pointer bitch, that was known to be especially fond of children. It had been kept in a cellar, without food or water for a few days, and afterwards, being teased, bit the boy on the scalp. The dog was killed in two or three days, without suspicion of madness. In ten days or two weeks, the child had symptoms of hydrophobia, and died. He may have been old enough to have had mental impressions about it—I don't know.

There is a popular impression among the laity that no bitch or well-bred dog ever goes mad. I do not think this one was mad."

DR. M. B. HARTZELL called attention to the belief

that a dog might communicate hydrophobia while its own disease was still in the stage of incubation, and that in real hydrophobia laryngeal spasms preceded the fear.

DR. CHARLES W. DULLES, in closing the discussion said that he had approached the study of this subject with a great deal of scepticism; and had himself been inclined to the views expressed by Dr. Mills. He had believed that hydrophobia was simply an acute mania, analogous to what is always known by this name, as well as to what is often seen in cases of grave hysteria and the nocturnal terrors of children. But, after giving due weight to the doubts cast upon many recorded cases, and after considering the difficulty of explaining according to any acceptable hypothesis another large number of them, he found that there still remained many which could not be discredited, except by assuming ignorance or carelessness, and sometimes both, on the part of some of the ablest men of our profession. These men, knowing the incredulity of others and the ground for this incredulity, still believed in the existence of this disease. Such men have asserted that they have observed hydrophobia in subjects too young for any explanation on the ground of mental impressions; infants, deaf-mutes and idiots have been known to have it.

While not prepared to assert his convictions too positively he must admit that, after eliminating all that seemed to be open to reasonable objection in connection with the belief in the existence of hydrophobia as a specific disease, there remains a residuum of fact which argues with the greatest conclusiveness for this belief.

NEW YORK COUNTY MEDICAL SOCIETY.

Stated Meeting, May 29, 1882.

DR. WM. C. JARVIS read a paper entitled *The Surgical Treatment of Chronic Nasal Catarrh, with a Practical Demonstration.* A number of new points were brought forward in the course of the reading, which were clearly elucidated by means of pathological specimens and numerous drawings enlarged from careful sketches. After eliminating several sources of error, which were productive of the unsatisfactory results obtained in the treatment of nasal catarrh, Dr. Jarvis entered fully upon the consideration of the subject.

His remarks were largely confined to a consideration of the tissue changes occurring in hypertrophic nasal catarrh. Five divisions were made, they being respectively: Hypertrophy of the turbinated tissues, thickening of the tissue over the septum, deviation of the cartilaginous septum, gelatinous polypi, and adenoma of the vault of the pharynx.

By a clear system of reasoning, he conclusively demonstrated that deviation of the nasal septum, gelatinous polypi, and adenoma of the vault, although considered as separate affections should be included as a part of chronic nasal catarrh. The first, by reason of its effects; the second, from its being either a primary agent or a secondary manifestation of the disease; and the third, an extension of the ordinary catarrhal processes to the vault of the pharynx.

Many of his views of turbinated hypertrophy now familiar to the profession had undergone no material change since their presentation. He spoke of a new feature found in connection with certain hypertrophies in effect, that many of the large, so-called sessile turbinated hypertrophies should be considered more properly as a permanent dilatation of the turbinated cavernous sinuses, or a sort of paresis of these erectile structures; he showed that the statements made in journals, that removal of gelatinous polypi by the use of his écraseur did not eradicate the base, were due to a misapprehension. In the majority of cases, on account of the peculiar shape of these growths, the wire loop was guided to the close attachment of the polypus and was sure to nip off the fold of mucous membrane, to which the polypi-pedicle was attached. The recurrence of these growths was due to the presence of clusters of embryonic polypi out of the reach of direct surgical interference and beyond the view of the operator. He had demonstrated the existence of these formations by clearing a passage to the roof of the nostril, and finding them in process of development. He explained that many of the so-called cases of deviation of the cartilaginous septum were really nothing more than distortion produced by superimposed irritative hypertrophies. He said that a large proportion of nasal catarrhs was due to years of local irritation produced by deflected cartilaginous septa, hence the comprehensiveness of the malady as the cause and effect were invariable. Much stress was laid upon restoring the symmetry of a distorted nasal gutter to avoid the ill effect of defective drainage and pressure irritation. He then brought forward a system of simple operations with new and ingenious instruments. All the abnormal conditions were admirably corrected, by his new method of operating, with little pain and hemorrhage.

MEDICAL ASSOCIATION OF CENTRAL NEW YORK.

Fifteenth Annual Meeting, held at Rochester on Tuesday, May 16, 1882.

(Specially reported for THE MEDICAL NEWS.)

THE fifteenth annual meeting of the Medical Association of Central New York was held at Rochester on Tuesday, the 16th inst.

In the absence of the President and Vice-Presidents, DR. JAMES CHAPMAN, of Medina, was chosen President *pro tem.*

After the appointment of the several committees and transaction of the usual routine business, DR. HAMLIN, of Auburn, read an exhaustive paper on the *Opium Habit*, which was highly commended in remarks by several speakers.

DR. J. O. ROE, of Rochester, read a paper on *Tumors of the Lower Pharyngeal Cavity*, and reported cases.

DR. BAMBER, of Carleton, presented a case of *Malformation of the Genital Organs.* A child, 15 months old, had a penis of normal size, with prepuce but no urethra. Below the penis was what might be called a bifurcated scrotum, presenting the appearance of the labia majora in the female. On one side (in the labia) could be felt a small tumor, the testicle. Beneath the scrotum was the urethra, from which the urine passed guttatim. The organs resembled those of a female with an abnormally large clitoris.

Most of the afternoon was occupied with the discussion of the following resolution which was offered by DR. W. S. ELY, of Rochester, who explained at length his course as a member of the committee which presented the New Code to the State Society:

Resolved, That, in the opinion of the members of this Association, the adoption of specific rules by the State Medical Society for the guidance of physicians in their professional conduct is not deemed advisable, and we would urge the entire abolition of the Code of Ethics now in force, or the substitution therefor of Dr. Roosa's simple declaration, which was presented by him at the last meeting of the State Society.

It was explained by Dr. Ely that the question would again come up at the next meeting of the State Society, and he wished to obtain an expression of the sense of this Society.

After a prolonged discussion, which was participated in with evident warmth, it was finally voted to defer

the consideration of the resolution until the semi-annual meeting in November.

The following officers were elected for the ensuing year: *President*, Dr. Theodore Dimon, of Auburn; *Vice-Presidents*, Drs. Chas. S. Starr, of Rochester, and I. N. Goff, of Cazenovia; *Secretary*, Dr. J. N. Arnold, of Clyde; *Treasurer*, Dr. Alfred Mercer, of Syracuse.

CORRESPONDENCE.

HÆMORRHAGE FOLLOWING THE USE OF MURIATE OF AMMONIA.

To the Editor of The Medical News.

Sir: In The Medical News of April 29, I see an article by A. B. Isham, M.D., reporting a case of "Purpura Hæmorrhagica, Hæmaturia, and Mucous Hæmorrhages, apparently Caused by the Administration of Ammonium Muriate." I was particularly interested in the article, as the Doctor detailed an experience similar to my own, and drew conclusions identical with those at which I had arrived.

It is with the view of adding my testimony to that of Doctor Isham's, and calling out the experience of others, that I detail a case coming under my own observation.

Mrs. J. T., married, æt. thirty-nine, of active habits, addicted to the use of tobacco and alchoholic stimulants; came under my treatment for hepatitis, on January 5, 1880. Her disease ran a typical course, passing into hepatic cirrhosis accompanied by ascites, icterus, etc.

The ascites, I relieved by the ordinary treatment, combined with local sponging over the hepatic region, with a strong current of electricity.

She has gone along for the last two years enjoying moderate health, for a person of her habits. But after one of her protracted sprees, during which icterus was a marked and troublesome symptom, I found nothing that would relieve her as efficiently as these two prescriptions, which for convenience we will call No. 1 and No. 2.

No. 1.

℞. Potass. acetat., ... ℥iij.
Infus. digitalis, ... ℥vj. M.
Sig. Tablespoonful every eight hours.

No. 2.

℞. Ammoniæ muriat., . . . ℥ss.
Elix. taraxaci comp., . . ℥vj. M.
Sig. Half tablespoonful every three hours.

After one of her usual sprees, instead of sending for me, she drank about a quart of ℞. No. 2, taking it, I suppose, as directed; taking No. 1, as directed, in the meantime. She got no better, sent for me; I found her weak, emaciated, vomiting, and bordering on delirium tremens.

I stopped all medicine, for the time being, and gave her, per rectum, a large dose of potass. brom., hydrat chloral, and ½ of a grain of morph. sulph. It quieted her, she went to sleep and slept for twenty hours, woke up refreshed. I put her on lime water and milk until her stomach seemed to act well; then I put her back on prescriptions No. 1, and No. 2. I saw her every day for ten days; she seemed to be progressing favorably, when she sent for me early in the morning.

I found her bleeding profusely from the nose, eyes, mucous membranes of the fauces, and hard palate, and the bowels. She informed me that she had been bleeding a little now and then for four days, but had said nothing to me about it. I stopped all medicine, except the potass. acetat., and put her on hydrochloric acid and sacch. pepsine. I had a great deal of trouble to control the hæmorrhage, and it was four days before I checked it entirely. I was puzzled to account for the hæmorrhagic condition at the time; but after studying the case for a day or two, I came to the conclusion that it was produced by the ammonium muriate, and acting on this, I have given her no more of the drug.

Yours, very truly,
W. T. Lucas, M.D.,

Guadalupe, Santa Barbara Co., Cal.

NEWS ITEMS.

NEW YORK.

(From our Special Correspondent.)

The Bellevue Staff Reorganized.—Owing to the continual strife among the faculties of the three principal medical colleges, the Bellevue Hospital College, the University Medical College, and the College of Physicians and Surgeons, for positions on the medical staff of Bellevue Hospital, the Commissioners of Public Charities and Correction held a meeting on May 12, for the purpose of arriving at a more satisfactory arrangement for filling vacancies. In accordance with a plan submitted by Dr. Austin Flint, Jr., it was decided that each of the above-named colleges should be equally represented in the Medical Board. It was further decided that a number of appointments, equal to the representation of any one of the colleges, should be held by medical gentlemen not professors in any of the above-named colleges. Each college faculty has the power to fill its own vacancies. It is also understood that if a college professor, holding an appointment on the visiting staff, resign his professorship in the college, he also loses his appointment on the visiting staff of the hospital. Patronage is further extended to each of the above college faculties by permitting them to appoint their own house staff.

The members of the old Board are as follows: Drs. Alonzo Clark, A. L. Loomis, Austin Flint, W. T. Lusk, E. G. Janeway, William Polk, W. H. Thomson, Francis Delafield, A. Jacobi, H. F. Walker, J. P. White, Lewis A. Sayre, Stephen Smith, J. W. S. Gouley, A. B. Mott, W. F. Fluhrer, C. McBurney, E. L. Keyes, C. Phelps, L. M. Yale, L. A. Stimson, and R. F. Weir. The members of the new medical board have already been selected by the various colleges and approved by the Commissioners of Charities and Correction, and are as follows:

Bellevue Hospital Medical College.

Physicians.	Surgeons.
Austin Flint,	E. L. Keyes,
E. G. Janeway,	J. D. Bryant,
A. A. Smith.	F. L. Demis.

Gynecologist, W. T. Lusk.

University Medical College.

Physicians.	Surgeons.
Alfred L. Loomis,	Stephen Smith,
W. H. Thomson,	L. A. Stimson,
F. R. S. Drake.	J. W. Wright.

Gynecologist, W. M. Polk.

College of Physicians and Surgeons.

Physicians.	Surgeons.
Alonzo Clark,	R. F. Weir,
Francis Delafield,	C. McBurney,
A. Jacobi.	T. T. Sabin.

Gynecologist, G. L. Peabody.

Non-collegiate Representation.

Physicians.	Surgeons.
James J. Williams,	J. W. S. Gouley,
W. G. Wylie,	William C. Hunter,
H. F. Walker.	Frederick Lange.

Gynecologist, Walter R. Gillette.

Drs. L. A. Sayre and A. B. Mott retire from the old board and become members of the consulting staff. Drs. Mason and Wood, of the old board, recently died. Drs. White, Fluhrer, Phelps, and Yale retire from the visiting staff of the hospital.

WASHINGTON.

(From our Special Correspondent.)

CULTIVATION OF CINCHONA IN THE UNITED STATES.—This subject was brought before the House of Representatives on May 17th by the reading of the following communication from Dr. George B. Loring, Commissioner of Agriculture, which places the matter in abeyance until further and more extended meteorological observations can be made in a few favored localities.

"In reply to the resolution 'that the Commissioner of Agriculture be requested to inform this House whether any portion of the United States is adapted to the growth of the cinchona,' I have the honor to state that for the past sixteen years the Department of Agriculture has annually distributed cinchona plants, some seasons to the amount of many hundreds, and that the reports received afford but little hope for success except in Southern California, and, so far, no trustworthy experiments have been made in that region.

"Some of the species will live in Southern Florida, notably *Sinchona succirubra*, which is one of the most robust, as also one of the most useful; but the climate of that State is not considered so promising for the establishment of an experimental plantation as the higher lands of Southern California."

"Dr. J. Elliot Howard, of England (high authority in everything relating to the cinchona), in the transactions of the Linnæan Society, remarks that "it must be remembered that these are mountain plants, loving free air and alternate mist and sunshine, while the hot, close atmosphere of the lower lands is always injurious to their perfection as quinine-producing plants."

"The object sought to be obtained by the Department in its distribution of cinchona plants was that of making practical tests in the most promising localities in regard to their permanent introduction; this being the only safe method of procuring such information.

"The climatic conditions under which the cinchona flourishes in its native habitats have been repeatedly described and are now comparatively well known. The management of an artificial cinchona plantation is now as well understood as is the management of an orange grove.

"In the Indian cinchona plantations the best results are said to be obtained in a warm, equable, and very moist atmosphere, at elevations where the mean yearly temperature indicates 64° Fahrenheit, and in those established in Saint Helena the plants flourish well at an elevation of 1,500 feet above sea-level, in rich lands, bathed in moisture, the mean temperature for the year being 60°.

"It is shown in the reports of the Signal Office that the mean temperature for the year at San Diego is 60°, the highest monthly mean reaching 68°, in August, and the lowest monthly mean being that of 53°, in January and February. So far as thermometric figures indicate atmospheric temperature, the climate of San Diego corresponds with that of Saint Helena; but it is well known that the thermometer alone is not a safe guide in comparisons of this kind, the hygrometrical condition of the atmosphere being of equal, if not of greater, importance as regards vegetable growth, and here, as elsewhere, a well-conducted practical test with the growing plants will settle the question of adaptability.

"This, as well as many other questions of similar import, could readily be answered by this Department if means for doing so were placed at its disposal."

VIENNA.

(From our Special Correspondent.)

PROFESSOR BILLROTH AND PIROGOFF'S ILLNESS.—Much difference of opinion and discussion has occurred in medical circles over the illness of the recently deceased famous Russian surgeon, Pirogoff. The discussion has arisen from the difference in opinion of Prof. Billroth and the attendant Russian surgeons. Prof. Billroth has recently written a letter to Dr. Wywodzow, in St. Petersburg, who had sent a portion of the tumor, from which Pirogoff suffered, to Vienna. I make a few abstracts from his letter:

"More than two-thirds of the sections taken from the tumor consist of a small-celled, vessel-rich, fibro-sarcomatous tissue; upon one periphery of the section, there are, however, very distinct epithelial structures, and in one corner is a bit of exquisite epithelial-carcinoma with epithelial pearls; the latter are apparently somewhat horny and possess a peculiar bright-brownish color; whether this color was originally so, or perhaps has arisen from the employment of Peru balsam which I recommended to Pirogoff, I am not able to decide.

"From this discovery, it appears that my views of the case, as well as those of my Russian colleagues, were correct. When Pirogoff consulted me in Vienna, I had the impression that the disease had originally acted as a chronic inflammatory process in the alveolus of the last upper left molar tooth; this tooth became loose and fell out. Then the chronic imflammatory, new formation grew forth, and took on gradually the character of an infiltrated sarcomatous epulis, as I have more frequently noticed in old people. In this stage, I saw Pirogoff. The regular tumor was free from epithelium; the surfaces appeared to be granulating well, were tolerably firm, and bore no traces of destruction. The epithelium was not entirely destroyed in these places, but grew here and there, as it followed several islands of cicatricial tissue. In consequence, this epithelial growth had taken on a more proliferating and destructive character; in this manner it resulted in the partial development of a genuine epithelial carcinoma. I should like to place the progress of carcinoma formation in parallelism with lupus and other chronic ulcers. The swollen lymphatic glands, which, as I hear, appeared later behind the angle of the lower jaw, were certainly the carcinoma of infection.

"However interesting and instructive the result of microscopic investigations in such cases may be, and however the etiology of the progress of the tumor may be anatomically illustrated, yet the diagnosis of carcinoma in the present case determined me not to operate.

"A man seventy years old, although still of most buoyant spirit, yet bearing in himself all signs of bodily marasmus, with cataract in both eyes, etc., had no prospect of surviving such an operation as one would have been obliged to make, only to remain for a short time free from a recurrence of the disease. Yes, I declare to you, if such a patient was both vigorous and twenty years younger than Pirogoff was, I would not operate upon him. My experience as a surgeon, now of thirty years' duration, has taught me that sarcomata and carcinomata, beginning entirely behind the upper jaw, are never capable of radical removal by operative procedure, even if one operates with some probability of his patient surviving the operation. Behind the upper jaw an operator is so hindered, partly technically, partly anatomically, that a clean extirpation is impossible, although he may be dealing with a very exceptional case of entirely encapsuled tumor.

"*I am no longer the unterrified, bold operator as you knew me in Zürich. I lay before myself now, always, the question, Would you permit this operation to be performed upon yourself if you were in the patient's position? Then, one comes, in the course of years, to a certain resignation. With every year which fate yet gives me, shall I become more affected by bad results in our art.*

"I should have blamed the surgeon who would have attempted an operation upon Pirogoff. So far as I myself was concerned, I knew I could accomplish no favorable result in this case; so I attempted, through encouragement, to lift up the psychical depression of the patient, and talk him over to patience, in order to deceive him as to the significance of his suffering. That is, indeed, all we are able to do in such cases. It is really perfectly natural that my views conflicted with those of my distinguished Russian colleagues, yet I have acted as, according to my experience, I held it my duty.

"If you wish to publish this letter I have no objections. I have withdrawn forever from the literary stage at the command of surgery, and confine myself, in word and deed, to my students and patients, so long as it may yet be permitted me to work. With friendliest greetings,

"Your most obedient servant,

DR. H. BILLROTH."

MILAN.

(*From our Special Correspondent.*)

DIED, at Florence, on January 31, VINCENZO BALOCCHI, Professor of Obstetrics. He was the author of numerous and valuable obstetrical works, and his text book on obstetrics passed through numerous editions. Prof. Chiara, Director of the Lying-in Hospital of Milan, has been offered the Chair of Obstetrics in Florence, made vacant by the death of Prof. Balocchi, and has, it is reported, accepted it.

A NEW SURGICAL SOCIETY.—At Rome, on April 3, the new Society of Italian Surgeons was inaugurated. The transactions of the society will be published yearly.

PORRO OPERATIONS.—Since the successful performance by Prof. Chiara, of the last successful Porro-Cæsarean section in Milan, on October 22, two other Porro operations have been performed in Italy, the first by Prof. Morisani, of Naples; the second by Dr. Dozzi, of Motta d'Livenza, both with fatal result. The pedicle was fixed in the abdominal wound. It is very surprising that, while in S. Catharina's Lying-in Hospital, they have operated upon eight cases, and succeeded in six, in the remaining part of Italy, in twenty-nine cases we have had twenty-two deaths, or a mortality of $75\frac{25}{29}$ per cent.

EXTIRPATION OF THE UTERUS FOR CANCER.—In contrast, the results of the total extirpation of the cancerous uterus by the vaginal section have been very encouraging. For instance, Prof. Bottini, of Pavia, has operated three times successfully, and Prof. Caselli, in three operations, had two successes. In his second case, Prof. Bottini adopted an important modification, which he recommends for similar cases. As a first stage of the operation, he recommends the removal of the epithelioma and the cervix uteri with the galvano-cautery wire, but instead of cutting off the neck of the uterus smoothly with the roof of the vagina, he places the platinum loop around the superior part of the vagina, removing a small ring of the vagina, and opening also the peritoneum at the same time. According to his experience, this method is not dangerous, and the extirpation of the body of the uterus becomes easier.

THE PUBLIC HEALTH.—For the *week ending May 13*, the following additional facts have been reported. There were 3 new cases of *small-pox* reported in Brooklyn, but no deaths; 3 deaths in Hudson County, N. J.; 15 in New Orleans, and 1 in San Francisco. There is apparently no abatement of this disease as yet in New Orleans. The mortality for the 13 weeks ending April 1, amounted to 79, by far the greatest part of it occurring in the month of March. Since April 1 there have been 98 deaths, or an average of about 16 per week, which is very nearly the actual weekly number. There were only 4 deaths from this cause in New Orleans during 1881. The apparent persistence of the disease in this locality is, therefore, nothing more than a later manifestation of what has been the experience, during the past year, in nearly all other cities. The same remark applies, but less accurately, to Cincinnati, where there were but 24 deaths during the first eleven months of the year, and 35 in December, the month in which the disease first assumed an epidemic prevalence. Since the 1st of January there have been 614 deaths in this city from small-pox alone, the greatest weekly number, 65, occurring in the week under notice. In those cities where the disease prevailed more or less extensively during the whole of last year, for example, New York City, Hudson County, N. J., Philadelphia, Pittsburg, and Allegheny, Wilmington, Del., and Chicago, it has almost ceased to exist, or exists to a very limited extent, except perhaps in Chicago, where there are still a considerable number of deaths weekly.

During the year 1881, there were 4007 deaths from small-pox in 66 cities and towns, aggregating a population of considerably over 6,500,000 inhabitants. These places represent 24 different States, stretching across the continent from the North Atlantic to the Pacific Ocean. The greatest number of deaths (not considered in proportion to population) occurred in Philadelphia, 1319; next, in order of numbers, follows Chicago, with 822 deaths; New York City, with 453; Pittsburg, 444; Hudson Co., N. J., 202; Richmond, Va., 144; Wilmington, Del., 118; Allegheny, 108; Brownsville, Texas, 65; Cincinnati, 59; Brooklyn, 34, etc. December was preëminently the month of its greatest prevalence; then follow, in order, November and October. The least number of deaths, 212, occurred in July.

For the first quarter of the year 1882, in a much larger number of places, aggregating a population ot about 8,974,000, there occurred 1672 deaths from small-pox, which represents a slightly higher rate of mortality, in comparison with the population, than occurred last year. From present information, the ratio of deaths to population for the second quarter of the year will show a most decided diminution, as compared with that of the first thirteen weeks of the year. Of the 1672 deaths, 1388 were distributed among seven cities as follows: New York City, 176; Hudson Co., N. J., 99; Philadelphia, 170; Pittsburg, 231; New Orleans, 79; Cincinnati, 311, and Chicago, 322.

There were 16 deaths from *diphtheria* in Brooklyn during the week ending May 13, which is slightly above the average number during the past thirteen weeks. From the same cause there were 4 deaths in Hudson Co., N. J., and 2 in San Francisco. *Malarial fevers* caused six deaths in Brooklyn, 6 in New Orleans, and 2 in Hudson Co., N. J. From *scarlet fever* 24 deaths were reported in Brooklyn, 6 in Hudson Co., N. J., and 3 each in Buffalo and San Francisco. This disease has continued persistently prevalent in Brooklyn since the first of the year, the deaths up to the present time being 534, or about an average weekly number of 28.

Brooklyn reports 22 deaths from *consumption;* San Francisco, 20; Hudson Co., N. J., and the District of Columbia, each 16; New Orleans, 14; and Buffalo, 7. From *pneumonia* there were 36 deaths in Brooklyn; 15 in Hudson Co., N.J.; 12 in the District of Columbia; 10 in San Francisco; 7 in Buffalo; and 4 in New Orleans.

For the *week ending May 20*, we gather the following facts from the records of deaths of a number of prominent cities:—

Small-pox.—In most of the records before us, there are no deaths reported from small-pox. Cincinnati shows a slight falling off in the mortality from this disease, the deaths for the week numbering 57. New York City reports 7 deaths; Philadelphia, 6; Milwaukee, 2, and 2 new cases; Richmond, 1; Pittsburg, 5; and 14 new cases of variola and varioloid; Boston, no new cases and no deaths; Cincinnati, 57; Louisville, 5: Detroit, 1 death and 2 new cases; Wilmington, Del., 1 death; Nashville, 2 new cases; and Memphis, 3 deaths.

Cerebro-spinal Meningitis.—There was no unusual prevalence of this disease during the week past.

Croup and Diphtheria.—There is nothing specially to note with regard to croup. The deaths from diphtheria in New York City have not varied much for a number of weeks. The last week's record was 37 against 42 in the week preceding. There was a considerable increase in the mortality from this cause in Philadelphia, and, to a less extent, in Boston. The deaths were as follows: Boston, 13 deaths and 36 new cases; New York City, 37 deaths and 7 new cases; Philadelphia, 18; Cincinnati and Detroit, each 3; Milwaukee, 3; Pittsburg, 4; and in most other places not a single death recorded.

Scarlet Fever.—This disease caused 61 deaths in New York City; 11 in Philadelphia; 4 each in Cincinnati and Detroit; 3 in Pittsburg; 1 each in Providence and Boston. There were 20 new cases in the latter city and 17 in Milwaukee. The disease shows a tendency to increase in Philadelphia.

Typhoid Fever.—This fever, which has been so very prevalent in Philadelphia all winter and spring, now shows evidence of abatement. The deaths for the week were 10, which is the smallest number in any week since March 4. There were 5 deaths in New York City; 4 in Boston; 2 each in Providence, Cincinnati, and Indianapolis; and in many other places only 1 death, or none at all.

Measles and Whooping-cough.—Measles caused 29 deaths in New York City; 7 in Philadelphia; 3 in Pittsburg; and 5 in Cincinnati. At the present time this affection is quite prevalent in Philadelphia, but the type of the disease is mild. Steamers recently arriving at New York and Philadelphia, quite likely at other places, from England, have brought a number of cases of measles, more particularly among the children. Scarlet fever, as well as small-pox, has repeatedly been brought to these places during the past season by immigrants, which have been arriving in vast numbers for many months. There is need of the most judicious quarantine management if these special localities, and those whence the most of the immigrants speedily go, are to be protected from the introduction and propagation of contagious and infectious diseases. From whooping-cough there were 10 deaths in New York City, a marked decrease; and 4 in Cincinnati. Elsewhere there is nothing specially to note.

Consumption and Pneumonia.—The mortality from consumption has, as a general thing, diminished during the past week, but that from consumption in the west and northeast has increased, and, in some instances, shows an extraordinary prevalence of the disease. There were 99 deaths from consumption in New York City; 37 in Philadelphia; 10 in Milwaukee; 4 in Richmond; 8 in Pittsburg; 25 in Boston; 18 in Cincinnati; 10 in Louisville; 8 in Detroit; and 5 in Providence. From pneumonia, there were 120 deaths in New York City; 53 in Philadelphia; 22 in Boston; 14 in Cincinnati; 5 in Providence; and 3 each in Louisville and Detroit. In New York City and Philadelphia, the mortality from this disease has equalled, if not exceeded, that of any week during the most favorable season for its prevalence.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending May 13, 1882, indicate that neuralgia, membranous croup, and scarlet fever increased, and typho-malarial fever decreased, in area of prevalence.

Including reports by regular observers, and by others, small-pox was reported present during the week ending May 13, and since, at eight places as follows: at East Saginaw (two cases), at Detroit (three new cases), at Flint (two cases), at Pontiac (one case), at Saginaw City, at Wayne County Poor House (three cases), at Manistee (two new cases), May 15; at Plainwell (four cases of supposed varioloid), May 17, 1882.

AMERICAN SURGICAL ASSOCIATION.—The third annual session of this Association will be held at Philadelphia on May 31, June 1 and 2, 1882, in the Hall of the College of Physicians, northwest corner of Thirteenth and Locust Streets.

The meeting will be called to order on Wednesday, May 31st, at 11 A. M., by the President, Prof. S. D. Gross, who will deliver an address of welcome; after which the Association will proceed to private business. At 3 P. M., Prof. J. L. Catell, of the University of Virginia, will read a paper on *Sanitary Conditions in Relation to the Treatment of Surgical Operations and Injuries*, followed by Dr. W. W. Dawson, of Cincinnati, by a paper on *The Value of Esmarch's Bandage as a Surgical Appliance.*

On Thursday, June 1st, at 11 A. M., there will be a business meeting followed by a paper by Prof. Moses Gunn, of Chicago, on the *Treatment of Fractures of the Skull, Recent and Chronic, with Depression*, and a paper by Dr. R. J. Levis, of Philadelphia, on *The Treatment of Transverse Fracture of the Patella, with the Object of Producing Bony Union.* At 3 P. M., Dr. J. R. Weist, of Richmond, Indiana, will read a paper on *Foreign Bodies in the Air-passages*, and Prof. M. T. Briggs, of Nashville, a paper on *The Antiseptic Treatment of Wounds after Operations and Injuries.*

On Friday, June 3d, at 11 A. M., the Association will meet for the election of officers and the transaction of private business, and at 3 P. M. for the reading of volunteer papers and the exhibition of cases. The Committee of Arrangements have been notified that volunteer papers will be presented by Prof. S. W. Gross and Dr. J. Ewing Mears, of Philadelphia.

During the session there will be an exhibition of surgical instruments and appliances by the leading instrument makers of this city and New York.

DEATH FROM CHLOROFORM.—A case of death from the administration of two drachms of chloroform by a dentist for the extraction of teeth is reported in the *Omaha Herald* of April 28, 1882. The patient was a woman aged 35, and had a diseased heart and kidneys; three weeks before she had taken chloroform, which was administered by the same dentist, without any bad effect.

A MEMORIAL statue of Albrecht von Graefe, the eminent ophthalmologist, has been erected in Berlin, and was unveiled on May 22, his birthday.

THE PRESBYTERIAN HOSPITAL.—Dr. C. Galen Treichler, one of the physicians who brought the patient alluded to in our editorial of last week to the Presbyterian Hospital, preferred charges against Dr. Allis, the visiting surgeon, for neglect of duty, in a letter to the Board of Managers. At their meeting, on the 15th

of May, the Board investigated the facts most rigidly, and, we are glad to state, arrived at the following conclusion:

Resolved, That the Board, having considered the communication of Dr. C. Galen Treichler, and having inquired into the circumstances of the case referred to, find no occasion to censure the surgical staff.

STATISTICS OF THE MEDICAL CLASS AT THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.—A glance at the list of graduates who received their diplomas last week shows an unusual proportion of candidates who had previously obtained degrees either in literature or in the sciences. The Class of '82 numbered 105 in all, of whom a little more than one-third, or about 35 per centum, possessed the degree of A.B., A.M., B.S., Ph.B., or M.D., graduates of other medical schools often preferring before they enter upon active practice to pass a session at the College of Physicians and Surgeons, and append its diploma of medicine to that of some other school already conferred upon them. In the present agitation for reform in medical education and advance of standard, this record is certainly encouraging. Recently the short session at the College has been abolished, and a session of seven months per year has been adopted, the course being preferably three years. Of more interest to the cause of elevation of standard, however, is the catalogue of undergraduates. There were 555 students in the College; and of that number 202 already possess degrees of A.B., A.M., B.S., Ph.B., or M.D. The percentage thus represented is about 40 per 100—an advance upon that of the last class.

THE NEW YORK STATE MEDICAL SOCIETY AND THE NEW CODE.—Dr. E. R. Squibb, in this month's *Ephemeris*, says "that no radical and unexpected action of fifty-two members out of a profession of more than 3,800 can be settled without an acquiescence of a majority of those represented in the action, and who are to be governed by it. Hence it is but fair and wise that some measures be taken to ascertain whether or not this action be acceptable to, or be acquiesced in by, a majority of the profession represented in the State Society.

Therefore, in order to allow the whole profession an opportunity to express itself through its organizations, and thus definitely settle this matter one way or the other, the following preamble and resolutions will be offered at the first session of the annual meeting of the State Society, in February, 1883, and they are published now with the hope that all the county societies will take them up, and having discussed them freely and fully, will, by communications to the State Society through their delegations, pronounce definitely for or against repealing the action of this year. If any county societies be not heard from on the subject at all, of course it must be held that they approve of and acquiesce in the action; but it would be much better and more straightforward and manly to have the approval expressed. At any rate, the resolutions will give an opportunity to every county society and every permanent member to vote on one side or the other of the most important question which has come up in the profession for many years; and they will serve to remind all those who do not vote that their silence and inaction will be fairly construed into acquiescence, and make them morally responsible for any harm that may ensue.

Whereas, The Special Committee on the Code of Ethics, in its report at the last annual meeting, recommended a change in one part of the Code which was more in the nature of a revolution than of a revision, and, therefore, may be more radical than was expected or desired by the constituency of this Society; and

Whereas, That report was adopted at a session wherein only fifty-two members voted in the affirmative, and thus legislated for the entire profession of the State on a subject of vital importance in a direction which may not have been anticipated or desired by the profession at large.

Therefore, for the purpose of bringing the matter before the whole profession of the State for more general and more deliberate action, be it

Resolved, That all the action taken at the annual meeting of 1881, in regard to changing the Code of Ethics, be repealed, leaving the Code to stand as it was before such action was taken.

Resolved, That a new Special Committee of five be nominated by the Nominating Committee of the Society, and be appointed by the Society to review the Code of Ethics, and to report at the annual meeting of 1884 any changes in the Code that may be deemed advisable.

Resolved, That the report of this Committee be discussed at the meeting of 1884, and be then laid over for final action at the meeting of 1885.

Should this preamble and resolutions, after being freely published for consideration during the remainder of this year, and after being sent, as they will be, to the president of every county society of the State, be defeated as a whole when it is put to vote, then the action of this year will stand confirmed by the whole profession of the State, and it will be then definitely settled that the old Code of Ethics needed but little change, excepting that consultation with legally registered quacks of all kinds, which were before prohibited, should now be permitted.

If the preamble and resolutions should be admitted, the preamble would be adopted as a mere recital of the facts, and the test vote would be upon the first resolution. If that was defeated, it would necessarily defeat all the others, and would be equivalent to rejecting the preamble and resolutions as a whole. But, should the first resolution be carried, it would leave the whole matter exactly where it was before the appointment of the special committee, and then the question would be upon the second resolution. If this should be defeated, the defeat would carry with it the third and dependent resolution, and the effect of this defeat would show that the society was satisfied with the old Code of Ethics as it has stood for so many years; or at least would show that as yet it was not sufficiently dissatisfied with it to run the risk of making changes at present which might prove hurtful rather than beneficial.

If, however, the second resolution should be adopted it would raise a new committee having the same precept or duty as the previous special committee. But this new committee would be appointed in a very different way, and in a way very much more in harmony with so important a matter. The Nominating Committee of the Society being made up anew every year by the delegates and permanent members of each of the eight old senatorial districts of the State, meeting and selecting one of their number for this important committee, is necessarily a very fair and impartial committee, and comes afresh very directly from the constituency of the State Society. If this nominating committee of nine men, fresh from all parts of the State, should nominate this special committee just as they nominate the officers of the Society, and then if the Society should confirm or modify the special committee so nominated, then the committee would be a far better representative of the will and the wishes of the profession at large than if appointed, as the last one was, by the President of the Society.

Should the first and second resolutions be carried, and the third one be defeated, then the Society would proceed at once to a final action on the report of the committee, and should there happen to be only a few

members present, the important result would be reached through the bias of a two-thirds vote of the few, and the matter would have to be undone, if afterward it did not meet the approval of the many.

But, if the third resolution should be carried, the subject could be discussed as freely as might be desired, and would then go over for a year, thus giving plenty of time for any amount of deliberation and writing, and would come up for final action before a new audience fresh from the total constituency of the Society. By this course a much larger proportion of the profession could think and act upon it with the chances for a much wiser decision. An effort was made at the last meeting to have the report of that special committee discussed and laid over for a year, so as to come up for final action at the next annual meeting, but the motion was summarily defeated, and a final action was taken which careful deliberation does not sustain, and which probably could not have been taken in February next. This precipitate forcing through of an unexpected revolutionary measure by the mere power of six votes in a meeting of seventy votes, representing a constituency of over 3,800, is a kind of legislation always to be deplored, and which, by its very precipitancy and urgency, is far more likely to be wrong than right. The whole object of these resolutions is to ascertain whether, in this particular instance of this kind, the action taken was wrong or right as judged by the profession to which it is thus arbitrarily applied.

The resolutions will be offered at the first session of the meeting of February, 1883, and the Society will be asked to appoint a special session for their consideration, so that all may be present who desire to be.

THE TENNESSEE STATE MEDICAL SOCIETY AND THE NEW YORK CODE.—The Tennessee State Medical Society, at its late annual meeting, unanimously passed resolutions condemning the New York Code.

THE SPRINGFIELD (MO.) MEDICAL SOCIETY AND THE NEW YORK CODE.—The Springfield Society has adopted resolutions declaring its "continued adhesion to the doctrine laid down in the Code of Ethics of the American Medical Association," condemning the New York Code, and directing its resolutions on this subject to be presented to the State Society.

WHAT IS SAID OF THE NEW YORK CODE OF ETHICS.

The New York State Medical Society has taken medical ethics into its own hands, and has passed a law that sanctions consultation with any person holding a legal qualification to practice—that is to say, with eclectics, homœopaths, etc.—so long as they are licensed. This idea is not original; it will be remembered by our readers in connection with the addresses of Dr. Bristowe and Mr. Jonathan Hutchinson at the Ryde meeting. These gentlemen knew the sentiment of the profession too well to put the idea into the form of a rule of ethics or of practice. But the New York State Medical Society is more bold, and has passed the law. But it has reckoned without its host. The whole feeling of the profession in the States is against the step taken by the Society, unless it be some New York medical papers, which we may assume to be under the guidance of those who lead the Society. We need not say that the law is against the Code of the American Medical Association, which, while enjoining all reasonable liberality in meeting intelligent regular practitioners that will be acceptable to the patient, adds—"*but no one can be considered as a regular practitioner or a fit associate in consultation whose practice is based on an exclusive dogma*, to the rejection of the accumulated experience of the profession and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry."

This is the language of common sense and of loyalty to science, and evidently expresses the feeling of the profession in America, as it does that of the profession here. It is important to notice the fundamental error at the root of the regulation of the New York Society. It assumes that the mere qualification of practice is a guarantee of everything necessary; as if there were no need for a code of ethical principles between medical men. This is a great mistake. The standing of the profession in society and the respect in which it is held by the nations have their explanation as much in the high character of the ethical principles by which the conduct of its members is regulated as in the intellectual and scientific nature of their calling. A great part of medical ethics has always had reference to the mutual relations and obligations of medical men; so that the mere fact of men being equally qualified in the eye of the law does not dispose of the moral questions which arise in practice, one of which is the amount of respect due to those who assume the truth of exclusive dogmas, and swear by one teacher, to say nothing of the absurdity of the dogma and the discredit of the teacher. Our law very properly provides that the holding of any particular theory of medicine by a candidate shall not entitle an examining board to reject him. In free countries men must be allowed to believe things which to most of their fellows seem absurd. But that is no reason why the bulk of the profession should not act in defence of its dignity, or why they should not be at liberty to decline professional consultation with those who would lower the tone of medical science. Rather is it the very reason why medical societies should do what it is scarcely to be expected that the common law should undertake. We are assuming that the case is clear, that the shibboleth adopted is something inconsistent with the broad light of medical experience and common sense. This is the case of homœopathy, which is practised in its purity now by scarcely any of those who trade upon the word, and yet which is nothing if it is not exclusive. Its chief disciples have shown a readiness to abandon everything but the name, which has a sort of trade value among a certain section of the public. Such being the discreditable position of homœopathy we do not wonder that the professional opinion of the United States is strongly against the action and the ethics of the New York Medical Society.—*The Lancet.*

The regular profession cannot afford to be regarded as the most illiberal, and it is fast approaching this unenviable reputation on account of its adherence (?) to a Code that is as illiberal as it is narrow. . . . Reform is necessary, and will eventually accomplish itself.—*The St. Louis Medical and Surgical Journal.*

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MAY 16 TO MAY 22, 1882.

Lieutenant-Colonel GLOVER PERIN, *Surgeon;* Major WM. C. SPENCER, *Surgeon;* and Captain PHILIP F. HARVEY, *Assistant Surgeon.*—Directed to represent the Medical Department of the Army, at the annual meeting of the American Medical Association, to be held in St. Paul, Minn., on June 6, 1882.—*S. O. 114, A. G. O., May 17, 1882.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. XL. SATURDAY, JUNE 3, 1882. NO. 22.

ORIGINAL LECTURES.

VEGETATIONS OF THE ENDOMETRIUM.

A Clinical Lecture delivered at the Hospital of the University of Pennsylvania, May 24, 1882.

BY WILLIAM GOODELL, M.D.,

PROFESSOR OF CLINICAL GYNECOLOGY IN THE UNIVERSITY OF PENNSYLVANIA.

(Reported by WILLIAM H. MORRISON, M. D.)

GENTLEMEN: The case that I bring before you to-day is one of considerable interest. She gives the following history: She is sixty-eight years old; has had twelve labors at term, and two miscarriages; has had fourteen children, including two pairs of twins. The menses stopped when she was forty-five years old. Four years later she came to this country from Ireland, and within six months after her arrival, she began to lose blood per vaginam.

With such a history, the first thing that would have passed through my mind, if I had seen this woman when the hæmorrhage occurred, would have been carcinoma of the cervix. But that evidently was not the trouble, for here she is, not only alive, but in pretty good condition, and yet eighteen years have elapsed since this hæmorrhage took place. She tells me, further, that at this time a physician removed some "bleeding tumors," and the hæmorrhage ceased. She continued well for nigh eighteen years, until three months ago, when the metrorrhagia again returned. It is not a little perplexing for me, with a history like this, to determine off-hand, without an examination, what the cause of the bleeding is. Again the thought of carcinoma passes through my mind; but could not these attacks of hæmorrhage be due to polypi? It is exceedingly rare for polypi to occur after the change of life. They usually begin to grow a few years before the time of the menopause, and they always retard it; very rarely do they start after the cessation of the menses. Further, she has been examined per vaginam by her family physician, and not a trace of carcinoma or of a polypus was discovered. I wish you to remember, however, that when a woman tells you that her monthlys stopped when she was about forty-five or fifty years of age, and that they reappeared two or three years later, you will, in nine cases out of ten, find carcinoma of the cervix uteri. Once in a while, with such a history, you will come across a polypus, but, as I have already said, polypi do not appear, as a rule (to which there are very few exceptions), after the change of life; I cannot recall such a case.

I find that she has lost a leg. She tells me that it was removed by the surgeons in a Londonderry hospital for a chronic disease of the knee-joint. Some strumous disease, I suppose, which could not be cured. This may throw some light on the case. By digital examination I find that the cervix has been torn in one of her twelve labors. There is eversion, an ectropion of the mucous lining of the cervix, but it is not bad enough to cause an alarming bleeding. The womb feels to my finger as though it were retroverted. Placing one hand above the pubes, I feel a tumor, and this may account for the bleeding. But passing the sound, I find that while I am correct in thinking that the womb is retroverted, it is also perfectly movable. This shows that it has no close connection with the mass felt above. The sound gives a measurement of 3½ inches. Here let me show you a little wrinkle. The sound was bent with a very slight curve, and it is possible that it simply revolved within the cavity of the womb without moving that organ, thus leading me to think that the womb itself was movable. I do not think that this has been the case, for in a woman of 68 there is ordinarily but a very small uterine cavity. Yet, to be sure, I shall give a sharp curve to the sound and again pass it. It cannot now revolve within the uterine cavity, so it is certainly moving the womb—and with great ease. I now get a measurement of four inches, and there is much more blood on the sound than there should be. I also find that any movement of the uterus imparts no motion whatever to the tumor, and that the displacement of the tumor transmits no motion to the sound which is still in the cavity of the womb. Those of you on the lower benches can see this for yourselves.

The size of the womb and the presence of this amount of blood plainly show that there must be something wrong within the cavity. The next thing to be done is to use the curette. One word in reference to this instrument. The best one is the blunt steel curette. There is a blunt one made of copper wire, but it is too flexible to be of much service. The blunt steel curette can do but little injury, and therefore should always be tried first. Here is Sims' sharp curette, which I sometimes have to use. This is still more effective, but may do much mischief in unskilled hands, by scraping off healthy mucous membrane and wounding the womb. The blunt instrument is the one which I advise you to buy. You will often gain a vast deal of credit by its use in chronic hæmorrhagic cases, which have resisted the old-fashioned methods of treatment. It was but yesterday that I was called to see a lady simply because five or six years ago I had cured a friend of hers by using the curette. Immediately after this lecture I shall go to see, in consultation, a lady who has been bleeding for three months. I believe that I shall find vegetations inside of the womb, and that I shall cure her by their removal with the curette. In fact, let me repeat it, that I do not know of any operation by which you, as young physicians, can gain more credit, for you will certainly find some neglected cases of hæmorrhage in the town, village, or even cross-roads, where you may settle down to practice. In performing this operation to-day, I shall not use a speculum, as its introduction is rendered somewhat difficult by the wooden leg of our patient. If a woman has had much bleeding, the os uteri will usually be found sufficiently open to permit the introduction of the curette; but should it be too small, it may be gently stretched open by the uterine dilator. I now bring away a number of little growths, which may be benign or malignant. They consist of little gelatinous-looking projections, varying in size from a millet-seed to that of a pea. A word as to the causes. Chronic endometritis is the most frequent cause; but whatever causes congestion of the womb, favors their appearance. They are frequently met with in cases of retroversion and subinvolution. They are almost always present in cases of laceration of the cervix. I have also met with them in women who were avoiding pregnancy, especially when the method of withdrawal was practised.

I venture to say that none of you can give me a satisfactory opinion as to the nature of these growths from a microscopic examination. I have a great respect for

the microscope, and a still greater respect for those untiring gentlemen who work so faithfully at the microscope, and in vesical troubles, in growths outside of the body, and in growths inside of the abdominal cavity proper, I humbly yield to their decision. But when it comes to growths in the cavity of the womb, I put more faith in my eyes than in their lenses, and simply because they have failed so often in deciding for me the question of malignancy. They say that the cause of these failures lies in the fact that I cannot furnish them with a specimen of the stroma of these growths, but simply of their fungoid projections. Several years ago I had three ladies suffering from hæmorrhage under my care. One was a widow of magnificent physique and splendid health; the second was forty-five years old, and also in fine health; the third was an old maid, fifty years of age, and she was also in good health. They were all well developed, and two had florid complexions. They were all important members of society, and I was greatly interested in them. One of them had been sick for some time, and had been attended by a number of homœopaths, who pronounced the trouble "ulceration of the womb," and had treated it with nitrate of silver. I passed in the curette and removed a number of vegetations. Thinking they were benign, I foolishly said, "I have now cured you;" but in this opinion I was greatly mistaken. She had no bleeding for six weeks; then it returned. I again used the curette. After a time the hæmorrhage reappeared, and I had to curette the womb a third, fourth, fifth, and sixth time, until she finally very properly discharged me. She died soon after. The other cases had similar histories. I sent specimens of the growths from each of these cases to three of our best microscopists. Each one of them stated independently that the growths were papillary cancer, and all gave the opinion that the disease was malignant. They were right in regard to two of the cases, but the third one is still living, and it is through curing this lady that I was yesterday called to the case to which I adverted a few minutes ago. Since that time I have had a number of analogous cases, cases which unrivalled microscopists have pronounced to be either papillary cancer or sometimes as cylindrical epithelioma, but in which I have effected a cure simply by the use of the curette.

In two cases in which the disease was pronounced cylindrical epithelioma, I, in spite of the diagnosis, closed up bad lacerations of the cervix, which I considered to be the cause of the trouble. Where you have a bad tear of the cervix, you have ectropion; where you have ectropion, you have strangulation, and consequent blood stasis. The result is that you have too much nutritive activity, and, therefore, too much growth. In the majority of cases they are not new growths, but simply hypertrophy of existing elements. Reasoning from these facts, and from the previous failures of the microscope, I, in these two cases, closed the laceration, an operation which I should not have dreamed of doing had I considered the disease malignant. Both of these patients are now in good health. Dr. Baer has had a similar case. I should be very glad to have any of you who are using the microscope to examine these vegetations, and give me the result next week. But, as I have said, I have become so sceptical in regard to the microscopic examinations of growths of the endometrium that they now have but little weight with me. While talking, I have removed an unusually large number of these little bodies. It may be again necessary to use the curette, although one scraping will often suffice. After the growths are removed, I usually make an application of strong tincture of iodine in the uterine cavity. Very commonly, after this operation, an oozing of blood will keep up for a few days, and, very commonly the appearance of the next monthly period is delayed.

I shall now try to determine the nature of the tumor felt above the pubes. In this relation there is one point to which I desire to call attention. Women are very liable to accumulate fat at the time of the menopause. They then will often be possessed with the idea that they are either pregnant or have a tumor, when the supposed swelling is nothing but fat. This woman has quite a deposit of adipose tissue in the abdominal wall, but behind it there is something else. The question is, what is this something? It is elastic to the touch, and about the size of a child's head. I do not find marked dulness, as the tumor is not large, and consequently intestinal loops overlap it. I believe that it contains fluid, but it is difficult to say positively in regard to this, on account of the thickness of the abdominal wall. It is, probably, an ovarian cyst, and undoubtedly has nothing to do with the present trouble of hæmorrhage. My diagnosis is an ovarian cyst, and in addition a hypertrophy of the endometrium, or, if you prefer a scientific term in that language so consecrated to science that I expect to see the day when all our matriculates will speak it fluently, *endometritis hyperplastica*, but whether malignant or benign, I am not prepared to say. She will now be removed, but we shall keep an eye on her and have her return in two weeks.

Gentlemen, we often have to be "as wise as serpents and as harmless as doves" in our prescriptions. Now, I wish to see this patient again, but if I give her some bitter, unpleasant medicine, she may get out of humor and not come back. Her appetite is not very keen, so I shall give her medicine which is very pleasant to take, and which I think will give her a very good opinion of me. This medicine is the lemonade-iron, after the following prescription.

℞. Tincturæ Ferri Chloridi, . . . f℥iv.
Acidi Phosphorici diluti, . . . f℥vj.
Spiritus Limonis, ... f℥ij.
Syrupum, ... ad f℥vj.—M.
Sig. A dessertspoonful, in water, after meals.

I do not use the syrup of lemon in this prescription because it is sour, and there is enough of acid in the tincture of iron and phosphoric acid. I, therefore, add the simple syrup and spirits of lemon. If you wish to give the iron as a chloride, you can not do so by this formula, for I believe the chloride of iron in this combination breaks up into phosphate of iron, while hydrochloric acid is set free.

As my hour is nearly up, and there is not time enough to bring in another patient, I shall occupy the few remaining minutes in some desultory remarks about these uterine growths. The form most frequently met with is *fungous degeneration of the endometrium*. It is a benign lesion, due simply to over-nutrition, and consists in merely an hypertrophy of existing elements. The curette will ordinarily cure it; but if the cause of over-nutrition remains, the growths will often return. Among the causes of such undue nutritive activity are retroflexion, retroversion, interstitial fibroids, submucous fibroids, laceration of the cervix, single life, and sterility, whether natural or enforced. The next most common kind is *villous degeneration of the endometrium*. This is a papillary growth, and, like other analogous growths, may be either benign or malignant; but this question I do not think the microscope can decide. The treatment is the same as that of the above.

A third form is *sarcomatous degeneration of the endometrium*, and this form can, I believe, always be determined by the microscope. It is, I believe, invariably fatal, and is more likely to grow in polypoid masses. These are friable, very like placental tissue to the feel, and, having no capsule, break down under traction.

With regard to malignant disease of the womb, let me here point out certain facts which will aid you in diagnosis. Cancer of the cervix uteri is very rarely indeed found in women who have not born children. So true is this as a broad rule, and with so few exceptions, that were a supposed virgin, or an alleged sterile wife, to present herself to me with a cancer of the cervix, I should carefully search for the *lineæ albicantes* and for the other lesions of pregnancy. The reason of this is that a cervical cancer is almost always due to the irritation of a cervical tear. On the other hand, malignant growths of the endometrium, or of the womb proper, are very generally found in old maids or in sterile married women.

But once did I ever see any serious injury produced by the curette, although slight metritis is by no means an uncommon occurrence. In this case—a lady of over seventy who required the curette about once a year—I on one occasion perforated the thin uterine wall with a blunt curette. There was no doubt of the injury, for I afterwards, with considerable perturbation of mind, passed up the sound until the handle was lost in the vagina. I said nothing, but I did a deal of thinking, and you may be sure that my patient was watched with intense solicitude. But she got well without even a rise in her temperature; indeed, as she herself remarked, the operation did not "phase" her at all. It certainly did not "phase" her as much as it did me.

ORIGINAL ARTICLES.

ON SIMPLE CHANCRES OF THE PREPUTIAL MARGIN.

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IN giving a title to the brief article that follows, I have avoided using the term "chancroid" for the reason that, apart from any question of unity or duality of origin of venereal ulcers, it is misleading and incorrect. Clerc, who coined the word, designated by it the result of inoculation with the virus of the infecting or syphilitic chancre upon an individual who has, or who has had, constitutional syphilis. He also held that this ulcer might be inoculated upon healthy persons, producing only local effects, and that, occasionally, from it might spring the infecting chancre and constitutional syphilis. This ulcer, considering it the analogue of varioloid, he called "chancroid." (Clerc, Memoire du chancröide syphilitique, Paris, 1854.) It is needless to say that no American writer attaches such a meaning to the term "chancroid" at the present time. Then, again, in the sense employed by Bumstead and others (indeed, nearly every one in this country), "chancroid" is not recognized by European authors (if we except some in Great Britain) as designating the "simple chancre."

Since, then, the term is not in general use in the greater portion of the medical world, and since it has been given, by nearly all those who employ it in America, a signification different from that it originally had with its author and those most familiar with his opinions, there is no good reason why it should not be discarded. In speaking of the "chancroid," therefore, if we use the term "simple chancre," it may be easily distinguished from the "infecting chancre," and at the same time we employ language everywhere intelligible and not likely to be distorted in its meaning.

The characters of simple chancre have been often and ably described, and are for the most part easy of recognition. Every writer recognizes the fact, however, that it sometimes becomes difficult, even impossible, to ascertain the real nature of a venereal ulcer from its physical characters alone; time alone can afford a solution to the enigma. The difficulties attending the formation of a diagnosis seem, in some measure, to depend upon the locality of the ulcer, more than upon other influences.

Considering for a moment the features by which we determine the nature of a given chancre, features presented by the ulcer itself, without reference to the various accessory phenomena and historical data that so greatly aid in reaching conclusions, we observe that a simple chancre rarely exists alone, that it deeply excavates the tissues upon which it is implanted, that it secretes an abundant pus from an uneven, grayish, "worm-eaten" floor, presents to the touch a base without induration, or slightly resistent from simple inflammatory infiltration, often extends by ulceration, and multiplies by contagious infection of the neighboring parts. By these and other features the simple chancre may usually be recognized, but it is certainly true that the diagnosis often requires far more deliberation than most authors would lead us to believe. The difficulty will depend not only upon the simulation of other forms of ulcer by the simple chancre, but also upon the resemblance to the simple chancre sometimes offered by the infecting chancre. The former may, indeed, acquire a toughness and induration from various kinds and degrees of irritation, which may usually be distinguished, but which occasionally defy the powers of the most experienced observers, especially where, as frequently occurs, the injudicious application of irritating and feebly caustic remedies induces a cartilage-like density, the true nature of which, time and the abandonment of the treatment alone can determine. On the other hand, the infecting chancre may present characters indistinguishable from those of simple chancre, either from the obscurity of its proper signs, or from their absence.

It is not my purpose to enter upon this tempting field, at this time. For the present, I desire to speak of some of the peculiarities presented by simple chancres upon and just within the free border of the prepuce. Although statistics of this subject are rather scanty and unavailable (all simple chancres of the prepuce usually being considered together), there can be no doubt that this region is frequently attacked. Le Fort (Jullien, *Malad. Vener.*, p. 320) reports, of six hundred and fifteen cases of simple chancre, seventy-eight where the free border of the prepuce was the part affected.

In the conditions about to be described, the sores are developed only in those persons in whom the glans penis is habitually covered with a redundant prepuce, or in whom congenital phimosis is present. At first the ulcer does not differ from simple chancre in any other locality. If primary, the usual pustule may initiate the series of changes; or this may not be observed, either on account of its

ephemeral duration, or because the moisture of the parts has prevented its formation. If secondary to ulcers elsewhere, the primary lesion is usually seated upon the preputial mucous membrane or upon the glans. If, then, one is fortunate enough to see the lesion in its earlier stages, it will be found to present the characters of ordinary simple chancres; or, in the case of phimosis, if it is out of sight, it will reveal its presence by pain, soreness, redness, and œdema, and by purulent or sanguineo-purulent discharge. It may happen that the chancre will go through its phases without departing from the type of its kind. More commonly, there are observed changes that may be, with propriety, attributed to peculiarities of position, and which may be briefly described.

The simple chancre, more active and more inflammatory than the infecting or syphilitic chancre, situated upon the loose meshwork of connective tissue forming the prepuce, rapidly occasions an amount of inflammatory exudation that thickens the parts and destroys their natural elasticity. Where the prepuce is by nature redundant and prolonged beyond the extremity of the glans penis, the sore, primarily marginal, or secondary to more deeply seated chancres, exciting these changes, often rapidly induces a traumatic phimosis in those cases where phimosis is not of congenital origin. This may be more or less complete. There results, obstruction to the free escape of the copious purulent discharge of the chancre, and the epithelial lining of the prepuce, bathed in this fluid, becomes softened, macerated, and is often stripped off, exposing the subjacent parts to the dangers of auto-inoculation. These chancres rarely remain single, and when situated upon the preputial margin often present an aspect to which Bumstead and Taylor have directed attention (*Venereal Diseases*, 1879, p. 375). They are often "*exulcerous*, or superficial, their floor being nearly or quite on a level with the surrounding integument, a fact, which has been attributed to the constant irritation to which they are subjected from the subpreputial discharge and the urine." Locality, however, exerts here influences that produce other somewhat peculiar results.

The patient, either alarmed at the processes going on out of sight, or in his endeavors to practise the necessary care for insuring cleanliness and cure, attempts to retract the now stiff and narrowed or completely phimosed circle of the prepuce, over the glans penis. In these manipulations the weakened epithelial lining yields and cracks, just as constantly occurs in analogous conditions in other parts of the body. These cracks or fissures, running parallel to the axis of the penis, become inoculated with the chancrous virus, and there are produced a number of simple chancres arranged around the free rim of the prepuce, preserving, for the most part, the linear arrangement, but possessing all the properties of the chancre from which they sprung. There are now present one or more subpreputial simple chancres, together with an indefinite number along the preputial ring, all secreting freely, and accompanied by a greater or less degree of inflammation. Up to this point, while the processes have been interesting, and possessing peculiarities depending upon their location, there have been no complications preventing ready diagnosis and prognosis. When, however, the conditions above described have lasted for a number of days, the œdema and inflammatory exudation bring about alterations offering some obscurity. That portion of the prepuce nearest the ulcers begins to become indurated.

Induration of simple, non-infecting chancres is not an uncommon occurrence, notwithstanding many prevalent statements to the contrary. It must be understood, however, that this induration is usually of a purely inflammatory character, and may nearly always be distinguished by the skilled observer from the peculiar hardness characteristic of the infecting chancre. Nevertheless, the fact remains that the purely inflammatory infiltration of the simple chancre may become intense, while the specific induration of the infecting chancre frequently is very insignificant; so that uncertainty and error are often not only excusable, but may even be unavoidable. Indeed, were even expert observers obliged in all cases to form their diagnosis from the absence or presence of induration alone, less would be said and written about the ease with which one may decide upon the nature of venereal ulcers. Every one is familiar with the cartilage-like mass of induration often excited in a simple chancre by the foolish attempt of its bearer to treat himself, under the aspiring supervision of some "experienced" non-professional friend, when the crystal of cupric sulphate or the stick of lunar caustic or some other irritating application, are employed with a faith and perseverance worthy of a better cause.

In simple chancres of the preputial margin, the inflammatory infiltration of which we have been speaking, can produce an induration hardly less exactly resembling the specific induration of infecting chancre. It cannot be said, however, that the induration in these cases is identical with that dense, gristly hardness that characterizes the most pronounced forms of infecting chancres; it rather resembles the less decided induration that one meets in the common run of these. It is quite dense, quite unyielding, but gives to the touch a sense of *fibrous* resistance, and is not sharply circumscribed, though it involves more or less regularly the whole preputial ring. This condition is not assumed until after the lapse of a week or two at least, previous to which the diagnosis may usually be made readily. Probably the most instructive opportunity of realizing the difference between the cartilaginous hardness of the most pronounced infective character and simple inflammatory induration is afforded in cases of specifically indurated, subpreputial infecting chancre, where the irritation of the latter has induced the infiltration of which we are speaking, in the tissue of the redundant prepuce.

It often becomes impossible to decide upon the nature of a chancrous infiltration of the prepuce from a consideration of the physical characters of the sore alone. The patient, under the circumstances we have been considering, will present a reddened, swollen, and infiltrated prepuce, from the phimosed orifice of which a more or less copious, creamy, or sero- or sanguineo-purulent fluid escapes.

Slight retraction of the prepuce, all that can be practised, displays the encircling ulcers. To the touch the tissue serving as a basis for these chancres is indurated and resistent. To decide upon the exact nature of the process, we may be compelled to have recourse to other signs. It is seldom that the patient can be confronted with the author of his malady. The date of the contagious exposure often cannot be ascertained. For our guidance there remain, the condition of the inguinal glands and the results of auto-inoculation. Fortunately we here meet guides that generally serve to lead us out of our perplexing indecision. The inguinal glands will either remain unaffected or will undergo simple irritative or virulent inflammation, such as characterizes the course of simple chancres. These glands, however, may fail to supply quite satisfactory evidence. In certain individuals, scrofulous for the most part, they, in common with the lymphatic glands generally, are enlarged, resistent to the touch, and while lacking the stony hardness of the painless inguinal glands of true syphilitic infection, may, at times, give rise to mistakes, especially in view of the pre-existing anomalous condition of the preputial lesions.

The results obtained from auto-inoculation often lend, just here, valuable assistance; for while it can no longer be doubted that, to a certain extent, infecting chancres are auto-inoculable, they are so to a slight degree, not to be compared with the readiness with which the virus of the simple chancre excites ulcerative action.

Usually no special danger attends the course of simple chancres situated and behaving as above described. Their duration is apt to be longer, both from the difficulty of applying proper remedies and the liability to almost indefinite reproduction by contagion. Unless extensive ulceration exists far back upon the prepuce or upon the glands, very destructive action is not to be apprehended, nor does there seem to be any special tendency towards phagedena. There is often a considerable amount of suffering from the acute inflammation present, and the passage of urine is sometimes painful. The phimosis that is produced often remains permanently, after recovery, from scar formation; and firm indurations are apt to persist long after the disease has been cured. Weeks usually elapse before recovery is established.

The treatment of these chancres differs from that ordinarily pursued only from peculiarities of situation. Circumcision, or the various operations for phimosis are often practised, and are sometimes really necessary. The dangers of subsequent inoculation of the cut surfaces are very great, sometimes insuperable, and, unless there is imperative need to set free the imprisoned glans penis, on account of the intensity of the destructive process, cases will be found to do well, usually, without it. It may be considered advisable to operate, when from the degree of inflammation, or the appearance of phagedena, destruction to the tissues is imminent. It is but seldom that caustics should be used in the treatment of these chancres. In the great preponderance of cases they do more harm than good. A caustic, to be used efficiently, *must* destroy all of the chancrous virus; failing to do this, as it must obviously fail in nearly all of these ulcers, on account of their situation, it becomes an agent of mischief.

When phimosis is present, the patient should be warned against attempts to uncover the glans; the parts behind the preputial ring should be thoroughly cleansed with warm water, thrown in through an appropriate syringe. As soon as all discharges have been washed out, some mildly astringent solution should be injected under the foreskin. Weak solutions of zinc sulphate, of ferric potassio-tartrate, of aromatic wine, will be found to answer admirably. To the ulcers themselves care must be taken to avoid too stimulating treatment. Any of the various washes usually beneficial in the treatment of these ulcers may be employed. It will often be found advantageous to separate the surfaces of the prepuce and glans by pledgets of lint or of soft linen or cotton fabric soaked in the wash or applied dry. Iodoform often exerts the same charming influence here as in other localities. It should be applied in powder. Nothing but its abominable odor, which persists in spite of many ingenious devices to conceal it, prevents its general adoption. Calomel powder often does much good, as do also bland absorbent powders.

Under any treatment the duration of simple chancres of the preputial margin is somewhat more protracted than is usual for those of other situations. The phimosis often resulting from the cicatrization of the chancres can only be relieved by an operation.

A REMARKABLE CASE OF INTESTINAL OBSTRUCTION,

CONTINUING FOR TWENTY-ONE DAYS, WITH STERCORACEOUS VOMITING, RELIEVED BY INJECTIONS OF CARBONIC ACID GAS.

BY J. F. HEUSTIS, M.D.,
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MRS. H. was confined on the 5th of January, after a tedious labor, with her first child, a boy, and had a laceration of the perineum down to the sphincter ani muscle. This was immediately sewed up, and healed partially and slowly, but was prevented from complete union by the supervention of puerperal fever. This fever, accompanied by symptoms of metroperitonitis, lasted for three weeks, and produced such prostration and emaciation that bedsores formed on the back. She had scarcely recovered her strength, and was still thin in flesh, when she was seized with what appeared to be an attack of colic, on the 25th of February. Morphia was administered hypodermically, and afterwards internally, to sustain its effect, and after the pain was subdued, large enemata given, the bowels not having acted for several days. The enemata producing no effect, cathartics were given by the mouth the next day, and croton oil the next, but the bowels refused to act, and it was doubtful if the medicine remained down, the vomiting being almost constant.

When not under the influence of anodynes the

pain would return, and after a day or two, stercoraceous vomiting occurred. Seeing that it was a case of ileus, calomel and opium were given regularly (calomel, two and a half grains; opium, one grain) every two hours, but the opium had to be increased to two and a half grains, and sometimes given every hour when the distress was great. Warm poultices were kept on the belly, and large injections of soap and water, or ox-gall and water were used every day. The opium appearing to be too slow in its effect, a grain of morphia was substituted for it, and a quarter of a grain of extract of belladonna with the two and a half grains of calomel, which was kept up every two hours while awake. She would generally get a little sleep at night, but was hardly ever free from some pain, and almost every day there would be a large quantity of stercoraceous matter vomited—thin, and of a dirty yellow color, distinctly fecal in odor and appearance. Notwithstanding this unfavorable symptom, the expression of countenance remained good, and the belly soft. Before the coming on of an attack of stercoraceous vomiting there would be a rumbling of the bowels, but instead of causing a desire to go to stool, there would be a reversed action and then the horrible vomiting.

No spot could be located as the seat of the obstruction, and although the same train of symptoms continued from day to day, the last resort of making an exploratory opening of the abdomen was postponed. Her dozen pills (of thirty grains of calomel, twelve of morphia, and three of belladonna extract) would last two or three days, sometimes not so long, but there was no appearance whatever of salivation.

After this state of affairs had continued about seventeen days, it was determined to make an exploratory incision into the abdomen, and search for the obstruction, and relieve it if possible. But at the time appointed, the gentlemen to assist could not be got together, and the room was too cold for the performance of the operation; and it was deferred until next day. When seen next morning, her pulse and countenance were both good, and belly soft and free from any swelling; and the appointment was annulled. Very large injections containing ox-gall were forced through an India-rubber tube, passed about eighteen inches up the rectum and colon, with a stomach pump, but nothing but the injection would come away, or only a trace of fecal matter. Large quantities of melted lard were tried in the same manner, but the obstruction continued.

Having read of carbonic acid gas succeeding in such cases, I told the husband of the woman to get one of the large glass siphon bottles, sold as seltzer water, fasten the India-rubber tube tightly on the spout and after oiling it well and passing it far up into the bowel, turn on the seltzer. He did so in my absence, and when I saw her in the morning, she declared that the gas came out of her mouth; she was sure of it, for she tasted it distinctly. Still her bowels did not act, and she had another attack of stercoraceous vomiting next morning.

Her husband having got another quart bottle of seltzer, I attended to the administration of it myself, passing the tube about eighteen inches up the bowel before turning on the gas. It made a noise like escaping steam as it passed into the bowels, and before the bottle was half empty the feces began to flow out; and when the flow stopped, the gas was turned on again, to be interrupted by more feces; and so it was kept up, until the bottle was empty, and the bowels, too, apparently, from the quantity passed.

After that her bowels acted every day, and she had no further trouble with them. But it was some time before her nervous system could be brought back to a healthy condition, on account of the large quantity of morphia she had taken. She has been in very good health ever since, and is now better than she was before her baby was born.

As the exact seat of the obstruction could not be ascertained, its cause remained doubtful. Possibly a band of adhesive lymph resulting from the recent attack of peritonitis might have pinched the bowel, but in such a case, there would probably have been swelling and tension of the abdomen. In the absence of positive signs, it will be reasonable to assign a spasmodic contraction of the bowel as the cause, but why it should have continued so long, and not be relieved by such large quantities of morphia is a mystery. The elastic and pervading force of carbonic acid gas, thrown far up into the colon, would appear to be the readiest and best means of overcoming such obstructions.

HOSPITAL NOTES.

VIENNA GENERAL HOSPITAL.

(Service of PROF. CARL BRAUN.)

INTERSTITIAL PREGNANCY MISTAKEN FOR BIFID UTERUS.

(*Specially reported for* THE MEDICAL NEWS.)

AN interesting case, involving an error in diagnosis, has just left Prof. Carl Braun's gynecological wards for the Pathological Institute.

A woman, 35 years of age, Austrian, multipara, was brought into the wards one week ago, with high fever, and all the symptoms of septic metritis. Abdominal palpation revealed the existence of two round tumors, one to the left the size of a child's, the other to the right, of a man's head; vaginal examination established the fact of pregnancy, although the cervix had not disappeared and the os was not dilated, nor dilatable. Exploration of the cavity of the uterus by the sound was contraindicated, and the condition of the patient did not justify more accurate investigation by abdominal palpation.

After this examination of the case, Prof. Braun came to the conclusion that one of the following conditions must obtain:—

I. *Uterus duplex separatus seu uterus diadelphys* (Kussmaul, Klob), a condition in which retarded growth produces upon each side a *uterus unicornis*, both of which are more or less separated from each other; the vagina, when existing at all, being imperfectly developed, and almost always divided into two portions. *Uterus diadelphys* is really no true doubling of the organ, but consists in a division, through separated parts or halves, of the organ. *Uterus diadelphys*

occurs only in non-viable children, and can be dismissed from consideration in the present case.

II. In *uterus bicornis*, the highest grade of defective formation occurs, when both horns with double vaginal portion open into the simple or double vagina. This condition occurs rarely, and was formerly falsely designated as *uterus duplex*. This designation is false, since two Fallopian tubes and two ovaries never answer to each cavity in the *uterus bicornis*.

III. *Uterus bilocularis* (Rokitansky), *uterus septus* (Kussmaul), consists in the partition of the uterine cavity of an externally simple uterus, by means of a division wall arising from the normal uterine tissue, and descending perpendicularly to a greater or less distance, dividing the uterus into two cavities, one right, one left.

Whether pregnancy had occurred in a perfect, double uterus, in a two-horned uterus, or in a uterus with a septum, could not be definitely asserted. Prof. Braun was positive, however, that one of these three conditions must obtain. The question of extra-uterine fœtation was rejected as being extremely improbable.

The treatment adopted was expectant and palliative. Prof. Braun said that if Cæsarean section would be performed, in the patient's condition, it would prove fatal, though it was equally certain that if the woman was not subjected to operative interference, she would also die.

Twenty-four hours later the prophecy was fulfilled and the woman died. The *autopsy*, performed by Prof. Kundrat in the presence of Prof. Braun and the class, was extremely interesting in some of its developments.

The uterus was found somewhat enlarged and congested, pushed over to the right side, constituting the smaller tumor felt upon abdominal palpation. A large tumor was discovered under the left broad ligament, covered by the sigmoid flexure, constituting the larger tumor, to the left, noticed upon abdominal palpation.

Dissection of this tumor revealed an *interstitial pregnancy*. The fœtus was in the seventh month, dead, cuticle macerated, and the amniotic fluid discolored and offensive. By *interstitial pregnancy* Prof. Braun understands that form of extra-uterine fœtation in which the egg develops itself in that portion of the Fallopian tube which is surrounded by the uterine substance, *i.e.*, *Graviditas tubo-uterina*.

MEDICAL PROGRESS.

CONGENITAL INTESTINAL OBSTRUCTION.—At the meeting of the Clinical Society of London, held April 28, 1882, MR. PEARCE GOULD related a case of congenital intestinal obstruction. A. B., a female, aged three days, was brought to Westminster Hospital on August 5, 1881, because in spite of several doses of castor oil it had not passed any meconium or motion, and it had vomited several times. The child was thin, but showed no outward deformity. The anus was normal, and the terminal joint of the little finger could be passed into the rectum, which appeared to be closed over above it; no fulness or tumor could be felt in the pelvis per rectum. A catheter and probe were each stopped about one inch from the anus. The belly was distended, its walls œdematous, and there was a little ascites. Mr. Gould opened the belly above Poupart's ligament on the left side. A coil of distended small intestine presented, and as no distended large intestine could be found, it was carefully stitched to the edges of the incision and then opened. A large quantity of meconium at once escaped. The child died twenty-one hours afterwards. At the autopsy there was no evidence of peritonitis. The cæcum, the lower four inches of the ileum, and the first four inches of the colon were filled with a firm whitish plug of inspissated mucus of the consistence of cheese, which was firmly applied, but not adherent, to the mucous membrane. In the colon beyond this plug were found several masses of milk-white firm mucus. Below this the colon and rectum were empty, and contracted to the size of a clay tobacco-pipe stem. Above it the small intestine was distended with meconium and gas. It was pointed out that there was here no fault in development, but obstruction from a plug. From the white color of the plug it was assumed that it was deposited by the third month of fœtal life, as bile passes into the duodenum at that time. Three cases of congenital obstruction of the small intestine, briefly referred to by Mr. Holmes, were mentioned, and also the case of obstruction from a croupous membrane recorded in the Clinical Society's transactions by Markham Skerritt. Mr. Gould also insisted on the advantage of opening the belly in the groin in all cases of congenital intestinal obstruction in preference to lumbar colotomy, which would have been impossible in this case.

Dr. Coupland asked if Mr. Gould was sure the obstructing mass was really inspissated mucus. If so the case was really unique, and did not belong to the class of cases brought to the Society by Dr. Skerritt, in which there was a false membrane and inflammation of the intestinal wall. If it were mucus it was of interest, as showing that the glands of the intestine become active at a very early period of intra-uterine life.

Prof. Lister said that the point raised by Dr. Coupland was that of chief interest, and he hoped Mr. Gould could give further information on the point.

Mr. Pearce Gould replied that he was convinced that the obstructing plug was really mucus; the mucus membrane all around it was quite healthy; at each end the plug was soft normal mucus, and this gradually passed into the firm white mass.—*Lancet*, May 6, 1882.

PARTIAL RESECTION OF THE URINARY BLADDER.—This was the subject for discussion in the Society of Physicians, at Budapest, January 7th, introduced by DR. FISCHER. (*Pest. Med. Chirurg. Presse.*)

This operation was first performed by Pott; afterwards by Chopart and Desault. At present, however, it is seldom undertaken. Dr. Fischer has experimented on eight dogs and comes to the following conclusions:

The excision of a portion of the bladder is not so dangerous as the opening accompanying the high operation for cystotomy; the repair occurs immediately, when the edges of the wound have been accurately adjusted. In uniting the edges, the interrupted suture was found to answer as well as the continuous.

The author proposes the following indications for resection of the bladder:

1. Traumatic lesions, with crushing of the edges of the wound.
2. A diverticulum of the bladder, in case of encapsulated stone.
3. The protruding lips of vesical hernia.
4. Extensive general dilatation of the bladder when the cause is a remote one.
5. Neoplasms situated deep in the texture of the bladder.
6. Various vesical fistulæ.
7. Destructive ulcer of the bladder, threatening rupture.

The difficulty necessarily attending the diagnosis of part of these indications is much against them.—*Cincinnati Lancet and Clinic*, May 20, 1882, from *St. Petersburg Med. Woch.*, March 11.

CASE OF VICARIOUS MENSTRUATION.—MR. STEAR reported, at the meeting of the Cambridge Medical Society held April 11th, a case of vicarious menstruation from the nipples, occurring in a healthy woman aged fifty, who had been married many years, but had

never been pregnant. She stated that menstruation commenced at the age of thirteen, and had been regular and normal until about two years ago, when it ceased. For twelve months past, however, she had suffered from a discharge of blood from the nipples, which recurred every month and lasted from three to four days, the quantity of blood being such that she was obliged to wear a napkin. The breasts at these times were very painful, the pain being similar in character to that which she had always experienced when menstruating normally. The mammæ were large, but presented no abnormal appearance. There could be no doubt as to the genuineness of the case, as he had himself seen her more than once when the discharge was present; moreover, his patient had been much alarmed by its occurrence, and showed great anxiety to be relieved.—Prof. Paget said that many years ago he had seen a young girl at the Moorfields Hospital, who every month had a small effusion of blood into the anterior chamber of the eye at the menstrual period, the effusion becoming absorbed during the intervals.—*Lancet*, May 13, 1882.

SIGNIFICANCE OF ALBUMINURIA.—At the meeting of the Cambridge Medical Society on April 14, MR. CARTER introduced the subject of the significance of albuminuria, when not dependent on Bright's disease. He remarked on the frequent difficulty of satisfactorily ascertaining the precise meaning of albuminuria when unattended by kidney disease. Various albuminoid substances were known to occur in the urine, and besides the several forms of albumen, and the globulins, there also sometimes occurred the several ferments, ptyalin, pepsin, and trypsin. The results of various observers went to prove that out of a given number of cases of albuminuria, only about half would be of renal origin, and the remainder would be found to arise from other conditions. In one class of cases it was to be referred to the nervous system—neurotic albuminuria—and, like diabetes, it was not infrequently found to follow prolonged mental anxiety. The form in which it occurred in young men, the so-called albuminuria ot adolescents, had been regarded as neurotic, but Mr. Carter thought it more probable that it was connected with the sexual function; were it of nervous origin, it would occur in young women and girls, which it was seldom known to do. It would seem to depend upon some condition peculiar to males. Albuminuria frequently signified mal-assimilation of the albuminoid elements of the food. If the amyloids of the food failed to be normally assimilated, he suggested that a set of conditions occurred of which diabetes was the type; if the assimilation of the albuminoids were faulty, that other conditions arose which were indicated by albuminuria. The late Dr. Parks had called attention to the condition here referred to, which he named "food albuminuria." In yet another class of cases albuminuria signified some interference with the circulation of the blood, or some abnormal condition of the blood itself. In those affections of the liver in which it was a symptom, it might depend either on abnormal circulation, in which case serum albumen would appear, or on defective metamorphosis of the albuminoids, when it would almost certainly be due to the presence of some other albuminoid. In morbid pulmonary conditions also, it might indicate either interrupted circulation or defective pulmonary excretion. When it occurred in pregnancy, it appeared that impediment to the venous circulation was commonly the main factor, but there was also an altered quality of the blood itself.—Dr. Bradbury remarked that the subject was one in which he had taken a special interest. With regard to the albuminuria of adolescents, he had in his practice been consulted by many undergraduates affected by it, and had therefore unusual opportunities for investigating its cause. In a large proportion of such cases the albumen was only to be found after breakfast, and he had come to the conclusion that it was often due to seminal fluid finding its way into the urine in connection with the act of defecation. There could be no doubt as to the existence of many varieties of albuminuria, but it was difficult to determine the different forms. Often it was an accompaniment of indigestion, and sometimes occurred only after the ingestion of certain articles of food, as in one case which had come under his own care, in which it occurred only after the patient had partaken of boiled beef. He had seen cases also depending on hepatic derangement due to alcohol or other excess, and had noted the disappearance of the albumen when the hepatic enlargement subsided. Albuminuria with high arterial tension meant, as a rule, commencing Bright's disease; when accompanied by low tension, the probabilities were in favor of there being no renal disease.—*Lancet*, May 13, 1882.

EXTIRPATION OF AN EPITHELIOMA OF THE TONGUE BY THE ROUX-SÉDILLOT PROCESS.—According to PROF. VERNEUIL (*Gaz. de Hop.*, March 21, 1882), this process consists in opening the mouth by a median incision below the lower jaw, and has the advantage of affording a large field for operating; by this means the excision can be extended as far posteriorly as the disease can exist, even the entire half of the tongue back to its base, the soft palate and tonsils, and as much of the inner surface of the jaws as is the seat of the disease can be reached and conveniently operated on.

After chloroform has been given, the incision in the supra-hyoid region first exposes the sub-maxillary gland, and the facial artery is to be ligated. The maxillary gland is then to be raised up, and the lingual artery tied so as to prevent all bleeding. The lower jaw is then divided in the median line with the chain saw, and the diseased portion of the tongue detached from the alveolar border of the jaw, shaving off all of the soft parts; then after dividing the tongue in the median line with an écraseur, the tongue is drawn forward and the exact limits of the disease determined, the diseased portion, even back to the hyoid bone, if necessary, is excised either by the thermo-cautery or by ligating the tongue in mass.

After the excision, the divided lower jaw is sutured together with silver wire, and the soft parts stitched together so as to leave space for drainage of the posterior part of the wound; it is recommended to make all the incision with the thermo-cautery in preference to the bistoury, so as to avoid all bleeding. Finally, before inserting the sutures, a soft rubber sound is passed through the nose into the œsophagus through which nourishment is to be administered for the first few days.—*Journal de Méd. de Paris*, April 8, 1882.

PARACENTESIS CRANII IN CASES OF HYDROCEPHALUS.—MR. H. P. DUNN believes that—1. Paracentesis cranii is indicated in all cases of acute and chronic hydrocephalus in which, medicinal treatment having failed, the patient is clearly suffering from the increase of the fluid, and life is threatened.

2. It is the only means by which life can be prolonged, even if, by its performance, the disease is not arrested.

3. All the fluid which can be obtained should be withdrawn.

4. The operation may be required to be repeated should a re-collection of the fluid be followed by a return of the symptoms which rendered its previous performance necessary.

5. The risks associated with the operation are almost *nil*, if carefully performed.—*Lancet*, May 13, 1882.

Relations of Tuberculosis and Scrofulosis.—From an experimental and clinical study of this subject, Dr. H. Martin concludes:

1. It has been proved by numerous experiments that tubercle, when inoculated, can only produce tubercle.

2. Every foreign body, whether animal or vegetable, or whether living and healthy tissue, or living pathological tissues, such as that of tumors, or tissue destroyed by reagents or in process of caseous degeneration, when inoculated can only give rise to a *pseudo-tuberculosis*.

3. Scrofula, as at present understood, is perhaps not a distinct morbid process; many of its symptoms belong to the manifestations of tuberculosis. Inoculations in series furnish the only means of reaching a positive diagnosis.

4. When this method has been applied successively to the study of the different lesions of scrofula, it will be found that they are closely associated with tuberculosis, perhaps modified by a lymphatic temperament.—*Revue de Médicine*, April 10, 1882.

Subcutaneous Section of Adhesions for Reduction of Old Dislocations of the Shoulder-joint.—The fibrous adherences which form around the displaced head of the humerus are the great obstacle to be overcome in reducing the luxation. After six months for sub-coracoid luxations, and four months for the intra-coracoid, they are generally so firm as to render reduction impossible. Fracture of the neck of the humerus has already been proposed by Després for these irreducible luxations. M. Polaillon advocates the subcutaneous division of the fibrous bands, and has been able by this means to reduce a luxation of four months' standing, and recommends that whenever an extending weight of 200 or 300 pounds is unable to displace the head of the bone, the adherences should be divided, antiseptic precautions being taken, after etherizing the subject.—*Revue de Chirurgie*, April 10, 1882.

The Physiological Action of Blood-letting.—The unquestionable effect of local depletion in relieving some forms of inflammation appears to have been confirmed and explained by the recent researches of Dr. Genzmer, of Halle (*Centr. f. d. Med. Wiss.*, April 1, 1882). This observer has found that when inflammation has been set up in the web of the frog's foot in the usual way—say by means of a hot wire or by caustics—and the process is watched under the microscope, it is possible to remove the stasis, to empty the blocked vessels, and so far to relieve the inflammation by applying a leech to the limb of the animal between the lesion and the heart. The actual phenomena attending the resolution of the inflammatory process prove, however, to be the very opposite of what might have been expected. Instead of producing anæmia of the affected area, leeching leads to hyperæmia of the part by drawing the blood from the blocked vessels, and allowing a full and rapid stream to flow once more through them. Thus the leucocytes, clinging to the walls previous to diapedesis, are swept away in the blood-current; and one of the elements of inflammation is rapidly removed. But the abstraction of blood causes more than simple resolution. It is manifest that the free influx of blood into the inflamed area—that is, the hyperæmia—must restore the nutrition of the part, the reduction of which constitutes another of the factors of inflammation. Whether or not the leucocytes which may have already escaped from the circulation into the tissues pass back into the vessels, Dr. Genzmer is unable to say. Results similar in kind, but less marked in degree, followed scarification, instead of leeching, between the inflammatory focus and the heart. Distant venesection produced a decidedly less distinct influence. The results of these observations are decidedly valuable, but their importance must not be exaggerated. In the first place, as Dr. Genzmer remarks, they account for the effect of leeching *above* the seat of inflammation, not *at* or *over* it; secondly, they cannot be said to apply to venesection in visceral inflammations; and, thirdly, they do not explain the action of leeching or of venesection in the cases where these measures are clinically practised with most success—for example, in cardiac distress or in uræmia. It is possible that the antiphlogistic action of a poultice in inflammation may be the same as the local effect of leeching which has just been described, namely, the reduction of stasis, and the promotion of a free flow of blood through the damaged tissues.—*Med. Times and Gazette*, May 13, 1882.

Iodoform Wound Dressings.—Mr. Sampson Gamgee, for efficiency and safety, gives preference to a solution of iodoform in absolute alcohol (1 to 10, after Esmarch), and a similar proportion of iodoform and collodion (Görges); the latter is a hæmostatic and antiseptic preparation of special value in the management of tracheotomy wounds during diphtheria, and of operations on the rectum and vagina. The eagerness with which different absorbent materials, variously treated with antiseptics, have been adopted by particular surgeons, offers a noteworthy contrast to the comparative indifference with which the general principles underlying simple and efficient wound-dressing have been apprehended. Immobility and perfect drainage, elastic compression, and infrequent dressings are the essentials. These secured, the dynamics of the circulation are so perfectly under control, innervation is so little interfered with, that nutrition and repair proceed with a minimum of stasis and effusion, and practically without any decomposition. But the reception of any discharge that does occur, in powerfully absorbent and antiseptic pads, is obviously conducive to purity, and opposed to infection.—*Lancet*, May 13, 1882.

Gironde Vaccine.—M. Hervieux recently read before the French Academy of Medicine an account of the experiments made with the bovine vaccine sent to the Academy by M. Dubreuilh, of Bordeaux. His report ends with the following conclusions:

1. The heifer sent to the Academy by M. Dubreuilh showed thirty pustules in the neighborhood of the udder, which, on the fourth and fifth day of their development, presented all the characteristics of genuine vaccinia.

2. The matter extracted from these pustules, whether by puncture with a lancet or by pressure with forceps when inoculated in both heifers and children, produced a regular pustule, identical in all its characters with that of normal vaccinia.

3. With a very small number of exceptions, the inoculation produced positive results in all the children vaccinated, a pustule being formed at each puncture.

4. The inoculation of the Gironde vaccine on other heifers produced perfectly characteristic results, each incision being followed by a typical pustule.

5. On account of these points, the Gironde vaccine deserves to be classified with the most famous cases of spontaneous vaccine, as that of Passy in 1836, and of Beaugency in 1866.—*Bull. Gén. de Thér.*, Feb. 15, 1882.

Treatment of Puerperal Convulsions with Pilocarpine.—Pilocarpine is employed in the Maternity Hospital of Brussels in the treatment of eclampsia, as well as in premature labor. The following are the results obtained (*Journ. de Méd. de Bruxelles*, Oct. 1881, p. 315). Hydrochlorate of pilocarpine injected subcutaneously in doses of 1, 1½, or 2 centigrammes (.15 to .30

grains), is generally borne well by the patients; they do not manifest any repugnance to the repetition of the doses, even at close intervals. The uterus is manifestly influenced a few moments after the injection, even when there is no anterior contraction. This substance does not act in the same degree in all subjects, nor in the same person in its various applications. The uterine contraction is reproduced a certain number of times, and then is relaxed; pilocarpine aids the mechanical means which tend to advance labor. It has a remarkable power in attacks of eclampsia, especially in subjects suffering from generalized œdema. When there exists a profound coma, prolonged during the whole interval of the attack, much more prompt return is obtained of the intellectual faculties than obtained by the other means employed for this purpose. So long as the bag of waters is intact, the fœtus does not appear to feel the effects of the remedy.—*London Med. Record*, April 15, 1882.

BORO-GLYCERIDE IN OPERATIVE SURGERY.—MR. RICHARD BARWELL, reports three cases illustrative of the antiseptic value of boro-glyceride, and thinks that although three cases may be a small number from which to generalize, yet having regard to the diversity in character of those just reported, it may be concluded that we have in the boro-glyceride an aseptic for wounds safer and less irritating locally than carbolic acid, free also from the danger of constitutional poisoning. It may be that he has not hit on the best strength of solution for the dressing, and certainly some other diluent besides water will be desirable. He is now making experiments in that direction. Nothing, however, can be better than the action of this compound. The intricate and not very safe complications of carbolic treatment—the spray and all the inconveniences belonging to it—may now be laid aside. The method which he introduces is exceedingly simple; in using it, it is only necessary to place on the washed and sewn wound a few folds of lint soaked in the solution, to cover them with thin macintosh, and to secure them with a bandage. Under such dressing healing takes place in the most beautiful and perfect manner.—*Lancet*, May 13, 1882.

TREATMENT OF ECZEMA WITH ANIMAL CHARCOAL.—ONOCOOL CHUNDER CHATTERJEE claims to have found a specific for eczema in freshly-prepared animal charcoal made into an ointment and applied to the affected part. He finds it particularly efficacious in vesicular eczema confined to the extremities.—*Indian Med. Gaz.*, April 1, 1882.

ANÆSTHETIC MIXTURES.—One fluidounce of pure chloroform, half a fluidounce of pure ethylic ether, and half a fluidounce of pure or absolute ethylic alcohol (sp. gr. .795) is perhaps the most usual form of combination of these active anæsthetic substances. The substitution of methylene bichloride for the chloroform is an improvement, and Dr. Richardson, in his early experiments in the introduction of methylene bichloride, used it successfully in combination with absolute ethylic alcohol without ether; and with more success still when pure methylic was used instead of ethylic alcohol. His formulæ were: Methylene bichloride, one fluidounce and a half; absolute ethylic alcohol, half a fluidounce. Or, methylene bichloride, ten fluidrachms; absolute methylic alcohol, six fluidrachms. The last-named mixture, though a little slower in action than mythylene itself, is considered by Dr. Richardson to be "the safest known anæsthetic when the methylic alcohol is absolutely pure."—*Lancet*, May 6, 1882.

CARBOLIC ACID IN URINE.—DR. TOMMASI (*L'Imparziale*, Dec. 1881.) gives the following method of testing for carbolic acid in urine, as being free from the fallacies of some other methods. First, prepare an acid solution containing 50 cub. centim. each of hydrochloric acid and of distilled water, to which add 20 centigrammes of potassium chlorate. Secondly, shake up equal volumes of the urine and ether in a test-tube; let the ether rise, and decant it from the urine; the ether contains now the carbolic acid. Thirdly, dip a chip of deal or bit of match-wood in the decanted ether till it is soaked; then quickly into the acid solution; then expose to sunlight. The presence of carbolic acid is shown by a blue coloration of the chip; if there be none present, a faint greenish color may appear. One six-thousandth part of carbolic acid may be thus detected. The chip must not be too long exposed to the sun, and the acid solution should be freshly made.—*Practitioner*, May, 1882.

SULPHUROUS ACID AS A DISINFECTANT.—The *Mittheilungen aus dem Kaiserlichen Gesundheitsamte*, Bd. I., 1881, contains a paper by DR. WOLFFHÜGEL, a distinguished pupil of Pettenkofer's, as to the value of sulphurous acid as a disinfectant. Recent discoveries in microzoic pathology have thrown such doubt on the efficacy of so-called disinfectants that the implicit confidence of the past seems likely to be succeeded by hopeless scepticism. The belief in sulphurous acid, however, is so deeply rooted in the professional as well as the popular mind, that it seems almost a pity to disturb it. Dr. Wolffhügel has undertaken, by a course of experients, to ascertain the limits of its action, and the conditions most favorable thereto. For its production, he is content with the old method of burning stick sulphur, using a little spirits to set the combustion going, and fixes twenty grammes to each cubic metre of room space as the quantity necessary. In favor of the evaporation of sulphurous acid previously condensed to the liquid state are the absence of all risks of fire, and the greater amount that can be evolved in a given space, but in practice the cost would be a serious objection. Its activity is far greater in the presence of water, so that where bleaching or other destructive action is not feared, all articles exposed to it should be damped. Woollen fabrics absorb it far more than cotton or linen, but it does not penetrate to a sufficient depth into bales of goods or bundles of clothes, which should therefore be opened and spread out. In the dry state these are not appreciably injured by it. To aid its action, and to prevent its escape by diffusion, the walls and ceilings of rooms should be previously saturated with water. Dr. Wolffhügel finds that in the utmost dilution (0.75 to 1.0 volume per cent.) it speedily kills all bacteria and micrococci—as the bacillus of splenic fever, the cocci in putrid blood, etc.—in two minutes if wet, in twenty if dry; but that even in the highest state of concentration, as gas or in solution, it exerts no action whatever on spores. This is a most serious drawback, and he thinks that it would be well if we could abandon the use of all disinfectants that do not destroy spores as well as more developed organisms.—*Med. Times and Gaz.*, April 29, 1882.

DIRECT ELECTRIZATION OF THE STOMACH.—BOCCI (*La Sperimentale*) adopts Bamberger's classification of gastric troubles, and thinks that these divisions are generally associated and may nearly always be remedied by electrization of the walls of the stomach. He has found in numerous experiments that electrization of the stomach, either by applying the electrodes to the abdominal walls, or more markedly, when one electrode is passed into the stomach by an œsophageal sound, produces muscular contractions of the stomach, injection of the blood-vessels, and increased secretion of gastric juice.—*L'Union Médicale*, April 29, 1882.

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THE PROFESSION AND THE NEW YORK CODE.

FORTUNATELY for the interests of medical science, and for the welfare, not only of the profession, but also of the community at large, the issue between the advocates of the New York Code and the regular profession of the country is a very definite one, which it is impossible now to obscure by shifty argument or to evade by subterfuge, but which must be squarely met next Tuesday at St. Paul.

As there has just been an unmistakable attempt on the part of the most conspicuous supporter of the Code to misrepresent the situation, and even, *mirabile dictu!* to pose as an opponent of homœopathy, and as a stern upholder of the ancient and respected dignity and exclusiveness of the profession, it may be well to state as briefly as possible the precise status of both Codes.

The New York Code says: "Members of the Medical Society of the State of New York, and of the medical societies in affiliation therewith, may meet in consultation legally-qualified practitioners of medicine." It makes no restriction whatever, except as regards the possession of a lawful right to practice, and, indeed, would hardly seem to regard that as absolutely essential, for in a subsequent paragraph it states that "emergencies may occur in which *all* restrictions should, in the judgment of the practitioner, yield to the demands of humanity."

As we have quoted the exact words, and as they are susceptible of but one honest interpretation, it would seem almost unnecessary further to define the position. In view, however, of the evident desire of the advocates of the new Code to cover up the true meaning of the clause in a cloud of wordy generalities about "broad platforms," "demands of humanity," "liberality and dogmatism," etc., it will not be improper to give their original understanding of the situation, as set forth by their chief, and, indeed, almost their only, supporter among medical journals, before they made the discovery that they were in a hopeless minority, and while they still thought that the "radical step" "so deliberately taken" by the New York Society would be "imitated by others throughout the Union."

They then asserted, and we employ substantially their own language, which for a short time, at least, was unequivocal, that the "educated homœopaths of the present day do not come under" the prohibitory clause of the American Code in reference to consultations; that "any medical man who chooses to act according to his best judgment in consultation with any honest practitioner whatsoever can do so;" and that while circumstances "must necessarily, *for the present, at least*, narrow these consultations to questions of diagnosis" they will yet "undoubtedly lead to a better acquaintance on both sides with the therapeutic methods of each. The regulars can certainly lose nothing by knowing more of homœopathy," while the homœopaths will also "gain much." We should think so! If there is anything in these statements looking to the exercise of the new "freedom in consultations" merely in desperate emergencies and for the benefit of suffering humanity we would like to have it pointed out to us, and yet this last pitiable excuse is now almost the only one they have to offer in their defence.

A code which confers "upon each man the privilege of thinking for himself, and acting according to his own conviction of right," is practically no code at all. To take such a step in regard to any law, human or divine, is substantially to abolish it; communism or nihilism could ask no more! No other argument whatever has been advanced in their support, and stripped of these flimsy apologies, their proposition is reduced to the very simple and easily understood one of individual liberty in consultation, and the removal of the barriers which now separate the regular profession from the homœopaths, eclectics, *et id genus omne.*

It cannot be asserted that we have not stated their case fairly, as we have allowed them to speak for themselves. Now let us look at the opposing view.

The Code of Ethics of the American Medical Association, which has been adopted by every regular State and County medical society in the country, has been regarded for years as in the highest degree creditable to a profession, too firm in its convictions as to principle to demand for its members what is granted by no civilized community or society—unrestricted liberty of action; and too unswerving in its devotion to scientific truth to compromise with bigotry, quackery, or ignorance in any of their

manifold forms. *This* Code says, "No one can be considered as a regular practitioner, or a fit associate in consultation, whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry." To quote the *Lancet*, "This is the language of common sense and of loyalty to science, and evidently expresses the feeling of the profession in America," as it does, in truth, throughout the whole civilized world.

It can hardly be necessary to defend, in detail, this most excellent regulation. All of us who are not controlled by prejudice or self-interest, recognize clearly the evils involved in the professional recognition of the advocates of dogmas which are "nothing if not exclusive," and are honestly believed in by only a few ignorant and half-educated practitioners, but for the sake of their commercial value with a portion of the public, are employed as a cloak by the remainder of their pretended disciples.

That consultations with such persons would be necessarily degrading in their influence upon the physician, as placing him temporarily upon a level with one who is either intellectually or morally an unfit associate; that they would at the same time be useless or harmful to the patient; that by the encouragement given to quackery they would result in serious evil to the public; and that they would tend to diminish or destroy the present unmistakable and insurmountable barriers which divide scientific medicine from medical charlatanry, are such self-evident facts that they require no comment.

So far as we can determine, from the expressed opinion of the medical press, they are the sentiments of the overwhelming majority of the regular profession throughout the country. With two exceptions, all the State medical societies which have met this year, and to whose attention the matter was brought, comprising those of Maryland, Texas, Mississippi, Kentucky, Alabama, South Carolina, Georgia, California, New Jersey, North Carolina, Pennsylvania, Indiana, Wisconsin, West Virginia, Tennessee, and Missouri, have in the strongest and most unequivocal manner, and in nearly every case by an unanimous vote, condemned the New York Code, and reaffirmed their allegiance to the old Code. The State Societies of Kansas and Connecticut, although refusing to take positive condemnatory action, expressed no opinion in favor of the new Code.

In reply to systematic inquiries addressed to officers of all the County Societies of the State of New York, where it was to be supposed local influences would exert the greatest effect, we have received definite information which leads to the conclusion that the large majority of the profession in that State is unalterably opposed to the new Code. Most of these societies have not yet met, but of those that have, five have formally repudiated it, and not one has adopted it.

We have too much confidence in the sound judgment and unvarying rectitude of the profession to feel the least anxiety as to the result of the action of its representatives at St. Paul next week.

This is not the time, nor are they the men, to prove recreant to the faith and the principles which have been slowly fixed on an assured foundation by our learned predecessors and our talented and brilliant co-workers. Never before in the history of the world have the worth and nobility of our profession been so universally recognized. As the discoverer and destroyer of disease; as the conservator of individual and national health; as the recognized guide and instructor in matters involving the welfare of millions; as the steadily augmenting obstacle in the path of pestilence, famine, and death, Scientific Medicine may well be proud of her position to-day. Let us remember, however, that "who sees past evils only is a fool," and that to ignore now the great principles for which we have steadfastly contended, and to recognize as equals those who have not only failed to add one atom to the sum of human knowledge, but have been as thorns and pitfalls in the way of progress, would be, indeed, to descend to their level, to stultify ourselves and our ancestors, and to encourage for all time the friends and advocates of bigoted intolerance.

THE EXTIRPATION OF CANCER.

PERHAPS no one subject in operative surgery is of more absorbing interest, or of more frequent and practical moment, than the possibility of the successful—and by successful we mean the permanent—removal of cancer. We are gradually coming to think that some diseases, formerly believed to be incurable, are amenable to treatment, syphilis and cancer among the number. That cancer was a constitutional disease, and, therefore, ineradicable, was formerly the nearly universal doctrine. It was a pathological entity, represented by the caudate "cancer cell" so anxiously searched for by the pathologist of twenty years ago. But a score of years, and many a score of observers, have compelled our belief that cancer cells and many others are but modifications of normal tissues, rank growths in rich but unwholesome soils. This naturally led to the belief in the local origin of cancer, a view now so widely held that the *Lancet*, in a late issue, "takes this doctrine as established, that all the facts regarding malignant growths may be explained on the hypothesis of their local origin," and then asks the very pertinent question, "How can we explain

the lamentably frequent failure of surgery to radically cure the disease?"

The answer is plain, as our contemporary points out. The disease has not been wholly extirpated. Parts are left behind which to the eye appear healthy, but in which the microscope would discover the seeds of disease all ready to ripen into a rich and speedy harvest. Partial excision of the breast itself in malignant tumors has long since been condemned by all surgical writers of repute. But how far beyond this it is needful to go, is a point on which differences of opinion exist.

No one, perhaps, has urged so thorough and sweeping a removal, especially in cancer of the breast, as Prof. S. W. Gross, though we hardly think most surgeons are prepared to go so far as he has advised. Mr. A. Pearce Gould has lately read a paper before the Medical Society of London on the "Advisability of Enucleating the Axillary Glands in Cases of Removal of Scirrhous Mammæ," in which he concludes that "it is advisable to remove the axillary glands *in all cases of cancer* of the breast submitted to operation," and the president of the Society (Mr. Mason) even proposed to substitute the word "necessity" for "advisability." Mr. Gould would not only remove all *enlarged* glands, but *all glands whatever*.

He is undoubtedly right. To remove healthy glands can do no harm. The incision will be very little, if at all, enlarged; the glands, being small, can be easily removed without appreciable additional risk, and the vessels are in no danger. But very often what *seem* to be healthy glands are, in fact, diseased. Any careful surgeon who has examined them will recall cases, like Mr. Gould's, in which very small glands showed foci of cancerous disease as large as a shot or a pea—too small to produce any sensible enlargement, yet large enough to destroy all hope of a successful operation. *Delenda est Carthago* is as true in the surgical pathology of today as in the Roman politics of the time of Hannibal. We may differ as to methods; as to the object in view, we arein accord.

THE ELECTRIC BATH IN NERVOUS AFFECTIONS.

ONE of the novelties of the day is the advocacy of electric baths in the treatment of certain neuroses, by M. Constantin Paul. In various forms of trembling, in chorea, etc., he has had excellent results from this treatment. Hitherto, electric baths belonged to the armamentarium of quackery. Except Dr. G. M. Schweig, of New York, who has written on the subject, we know of no physician who has adopted the electric bath as a therapeutical measure. The reason why it is regarded by all scientific electricians as a faulty method, is that water offers such a powerful resistance to the passage of the current that the patient immersed receives too little to be effective. It is usual practice for irregular electricians to place the electrodes in contact with some part of the patient's body, when, the circuit being formed by the body, the water is a superfluity, or only performs the office of an ordinary bath.

Under such circumstances, we may well inquire how such important therapeutical results have been obtained? The influence of the mental state, the factor of expectant attention, the stimulus of hope on the organic functions, may be invoked to explain the results in cases benefited by the electric bath. When Sir Humphry Davy cured a case of hemiplegia by inserting a thermometer daily under the tongue of the patient, no therapeutical feat may be regarded as impossible to a powerful imagination. That this explanation may be true of Dr. C. Paul's cases seems confirmed by the testimony offered at a recent meeting of the Paris Therapeutical Society. After the report of several cases of chorea treated by Dr. Paul successfully by the electric baths, M. Cadet de Gassicourt related his experiences with three children whom he had treated by this method. He had not effected by a number of baths the least amelioration in the condition of the patients. "The children," he remarked, "supported the treatment with perfect indifference, and the effects appeared to be absolutely null." They were probably not old enough for the personal equation to have any value.

There is another form of electric bath, possessed of distinct therapeutical value. It consists in placing the patient on an insulated stool, and charging the body with statical electricity. When thus charged, sparks may be drawn from any part. In this form of electric bath, an active imagination may also have an influence over the pathological state of no little value. Indeed, the mental conditions of expectancy and hope probably enter as a factor in the curative action of every form of electrical application.

XANTHIC OXIDE CALCULUS.

IN the *New England Medical Monthly* for May, 1882, Dr. George L. Porter, of Bridgeport, Conn., reports a case of this the rarest of all the varieties of calculus. The clinical history of the case, and the laudably exact examination of the specimen, make it all the more interesting and valuable.

The present is only the eighth case on record, and is the only one ever recognized in this country. Fragments of two others exist in the museums of Guy's Hospital and the Royal College of Surgeons. Dr. Porter will place the two halves into which this specimen was sawn for examination, one in the Army Medical Museum, and the other in that of the Jefferson Medical College. The stone was

passed by a woman of eighteen without any very severe pain, although it was about one inch long and half an inch wide. Vague renal symptoms had existed from early life, but had not assumed any severity until about two years before the stone was passed. It was probably formed in the kidney.

Xanthic differs from uric acid only in having one less equivalent of oxygen. Calculi composed of it have a cinnamon-brown color, assume a waxy lustre when polished, are very compact but laminated in very thin layers. The first xanthine calculus was described in 1817 by Marcet. Langenbeck (1820) in Germany, and Gaillard (1873) in France, have described the two largest specimens on record. All the others have been recognized and described by British surgeons until the present specimen, the recognition of which reflects no little credit upon Dr. Porter.

CARLYLE'S DYSPEPSIA.

CARLYLE early began to suffer from indigestion. An insufficient and faulty diet, composed for the most part of oat-meal cake, which, in his poverty, was the only available food, was the chief cause of the derangement. He suffered from acid indigestion and flatulence, a condition in which, as all practical physicians know, the mind is especially prone to be depressed. No thinking person, reading his life, can fail to be deeply impressed with the influence of this dyspepsia on the development of his character and the bent of his genius. He was rendered gloomy, unsocial, taciturn, and intensely irritable. He slept poorly, he could not bear noise, and his thinking faculty required silence and seclusion for its proper action. The gloomy view which he took of the constitution of modern society, was a reflex of the mental depression due to bad digestion. His railings and wailings over the degeneracy of the times in which he lived; his hopelessness of any improvement, and his mean opinion of all the literary men and women with whom he came in contact, had their origin, and find their true explanation, in the same morbid state. How lamentable that a great genius, a philosopher who tried to see into the essence of things, should have all his opinions colored, even made, by a state of flatulence. Conceive, O honest reader, of a great philosopher, flatulent, and mistaking his bewildering fancies begot of indigestion, for the very truth.

ARTIFICIAL ALIMENTATION.

WE placed before our readers the first facts published by Debove in regard to his new method of forced alimentation. The method consists, it will be remembered, in passing into the stomach, through an œsophageal tube, large quantities of suitable aliment, chiefly milk and eggs. The method has now been tested on a sufficient scale to determine its real value. In a recent discussion before the Medical Society of the Hospitals of Paris, the experiences of various members were given. The results obtained in cases of consumption, and in the vomiting and emaciation of hysteria, are most surprising. As regards the phthisical, they gain rapidly in weight, the sweats cease, the expectoration diminishes, and cures are apparently effected, according to Debove. Equally good results in hysterical emaciation have been obtained by Dujardin-Beaumetz, Charcot, and Joffroy.

Debove has modified his method so far as to give the fresh meat in the form of an impalpable powder. One pound of this represents about five of the original meat. He thinks it of great importance to present as large a surface as possible to the action of the gastric and intestinal juices. Hence the typical foods for forced or artificial alimentation are milk and eggs in their natural state. As much as can be retained of the aliment is introduced into the stomach.

So far as we know, there has been no attempt to combine the system of Debove with the method of rectal alimentation by means of defibrinated blood. In the absence of diarrhœa, large quantities of defibrinated blood will be taken up by the rectal veins and appropriated to the nutrition of the body. A combination of the two methods ought to improve the condition more rapidly than adherence to one. Hence the suggestion seems worthy of further consideration.

IN our issue of May 20th, we ventured to show how completely Mr. Dwight, the "impartial and intelligent" lawyer chosen to expound to the medical profession its principles of ethics, had failed to comprehend the true issues of the case. We presumed then mildly to suggest that, as the logic and the common sense of his article were both radically deficient, even its law might be open to criticism, and we were therefore not surprised on receiving, subsequently, from an influential physician—one of the few "in every part of the country" who have *not* written to the *Record* "endorsing" the new Code, the letter which will be found in another column, and to which we invite special attention. As our esteemed contemporary has failed to comply with our oft-repeated request that it publish the letters of *its* "influential" correspondents, we shall set it the example by starting a "No-Name Series."

We think the extracts from the editorial columns of an esteemed contemporary, which we publish in our News Items, will be found interesting and instructive reading. But, as Pope observed of the ladies, "'Tis to their changes half their charms they owe."

REVIEWS.

ON THE RAPID METHOD OF CURE OF EXTERNAL ANEURISM BY MEANS OF THE ELASTIC BANDAGE. By A. PEARCE GOULD, M.S., F.R.C.S., Assistant Surgeon to Westminster Hospital. 8vo. pp. 52. London: J. W. Kolckmann, 1882

THIS is a careful study, based upon an analysis of seventy-two cases in which the method has been tried. The printed table does not include all the cases, for many have never been reported; it is not therefore claimed that the percentages deduced are exactly accurate. We think Mr. Gould has done all that could be done with the very limited number of cases at his disposal, for he is both painstaking and exhaustive in his study of them. But the reader of this pamphlet will at once see that the author of it has come to the examination of the subject with very strong predilections in its favor, and his attitude towards it is that of a pleader rather than of an impartial judge. This, together with the very limited field in which his examination is made, detracts in some measure from the value of his conclusions. But Mr. Gould has done good service in preparing the table of cases thus far reported. They are given in considerable detail, and make it possible for any one interested in the subject to go over the matter and test the accuracy of Mr. Gould's conclusions.

There is one point which can hardly fail to strike any reader of this pamphlet, namely, how prone men are to make trial of a new method without giving due weight to the *rationale* and exact method recommended by the man who first introduces a new procedure to the profession.

Mr. Gould has made a contribution to surgical literature of decided value, and which should tend to encourage a further and most careful testing of the method of treatment first adopted by Reid.

THE INCIDENTAL EFFECTS OF DRUGS; A PHARMACOLOGICAL AND CLINICAL HANDBOOK. By DR. L. LEWIN. Translated by W. T. ALEXANDER, M.D. Pp. 239. New York: Wm. Wood & Co., 1882.

THIS book is intended by the author to present an account of those deviations from the typical action of drugs, "whose recognition and correct interpretation are not always easy." These facts, he thinks, are not sufficiently given in the systematic treatises. He embraces them under the headings, tonics, astringents, acids, alteratives, etc The books on therapeutics accessible to American readers we think do, in the main, contain Dr. Lewin's "deviations;" nevertheless, there is much in this work to interest and instruct any one desiring to obtain an exhaustive knowledge of the present state of physiological therapeutics.

The translation seems to have been well executed, and we observe but few foreign idioms retained.

SOCIETY PROCEEDINGS.

STATE MEDICAL SOCIETY OF WISCONSIN.

Thirty-sixth Annual Session, held at City of Mineral Point, May 2 and 3, 1882.

(Specially reported for THE MEDICAL NEWS.)

THE thirty-sixth annual session of this Society was held at City of Mineral Point, May 2 and 3, 1882, to which place it was welcomed in behalf of the medical profession and citizens by the venerable ex-President, HARMON VAN DUSEN, M.D., in special honor of whom this session of the Society was held in this extreme southwestern part of the State.

The following

NEW MEMBERS

were elected: Dr. E. L. Boothby, of Hammond; Dr. S. E. Farnsworth, of Baldwin; Dr. Richard Cosen, of Dodgeville; Dr. H. J. Stalker, of Manston; Dr. A. E. Bulson, of Brodhead; Dr. B. M. Gill, of Linden; Dr. William McFarland, of Perry; Dr. E. J. Farr, of Eau Claire.

A paper was read by DR. KNUT HOEGH, of La Crosse, on

RUPTURE OF THE URETHRA BY EXTERNAL VIOLENCE,

in which, after relating the history of two cases, the symptoms, pathology, prognosis, and treatment of the injury were discussed at length. The prognosis is considered favorable so far as immediate results are concerned, but strictures are hardly to be avoided. The writer advocated boldness in cutting down upon the lacerated urethra, establishing a free outlet for urine, and for blood and wound secretions. After a few days a Nélaton's catheter may be introduced through the meatus, and guided into the bladder by the finger in the wound. Frequent irrigation with carbolic acid solution, the use of drainage tubes, and plugging with carbolized gauze were recommended. It is possible, even after free incision, that the vesical fragment of the urethra cannot be found. In such case, if pressure on the distended bladder does not reveal it, puncture of the anterior wall of bladder is necessary, through which puncture a strongly curved catheter may be passed into the urethra, so as to bring the end or point out through the artificial opening, in which way drainage tubes may be inserted. During recovery, continued use of bougies is necessary to prevent stricture.

Following the reading of this paper, there was an interesting discussion upon the

MOST USEFUL FORMS OF CATHETER FOR SIMPLE EVAÇUATION OF THE BLADDER,

in which the spiral catheter was generally condemned. By two or three speakers it was characterized as unscientific and unsafe. The solid metallic and the Nélaton's catheters were generally approved. The practical suggestion was made that frequently too little lubricant was used—that it was not sufficient to oil merely the outside of the instrument—it should also be half filled with oil, the outflow of which can be easily controlled by the finger on the outer end.

Following this discussion, DR. F. H. DAY, of Wanwatosa, read a paper advocating and defending

THE USE OF THE BINDER AFTER CONFINEMENT,

as a support to the recently overdistended abdominal walls, controlling excessive mobility of the uterus, and aiding in the prevention of hemorrhage. The Doctor declared that he would no sooner neglect the universal application of the bandage than he would neglect bandages and splints for a fractured limb. He would have the bandage worn in many cases for weeks, or even months, and would hold any practitioner to be criminally negligent who was careless or indifferent as to when or how it was applied. He believed the bandage useful also in preserving the form of the woman.

In the discussion which ensued upon the reading of this paper, it was evident that some of the speakers did not regard the use of the bandage in ordinary cases as either essential or useful.

DR. HUNT said that, though he had been taught that the bandage was an invaluable aid in preventing afterpains, and in diminishing the danger from flooding, and though he had used it with those ideas during the first ten years of his practice, he had applied it but

rarely for the last twelve or thirteen years, except in cases where the patient had ventral hernia, or was very corpulent. He did not believe it could be applied tightly enough to have any effect on hemorrhage without causing great discomfort. He always applied firm pressure over uterus during removal of placenta, and for five or ten minutes afterwards, which, in most cases, insured permanent contraction.

DR. GRIFFIN spoke particularly of the theory that the binder was useful in restoring and preserving the symmetry of the form, decidedly dissenting from that opinion. He believed the binder useful as a temporary support to the recently distended and now tired abdominal walls, but that its use was limited to a very short time, and that in most cases it became a discomfort and a nuisance to a woman after a very few days.

DR. VIVIAN believed the bandage wholly useless, except for the temporary feeling of comfort it gave the mother.

Interesting papers and reports were also made by the Chairman of the Committees on Obstetrics and Gynecology (DR. D. MASON), of the Committee on Ophthalmology (DR. E. W. BARTLETT), and of the Committee on Pathology (DR. N. LEUM), the latter of which was on *Local Tuberculosis of Bone and Lymphatic Glands*, and was illustrated by numerous blackboard diagrams, and was by vote made the subject of special discussion at the next annual meeting.

DR. J. G. MEACHEM, JR., read the peculiar history of a case of

RECURRING PHLEGMONOUS ERYSIPELAS AND PURPURA, FOLLOWED BY GANGRENE,

the subject of which, a man of forty-eight years, had in fourteen week four attacks of sickness, each preceded by a chill—the first two being of erysipelas, and the last two of purpura—the last attack being followed by dry gangrene of hands, for which all the fingers and thumbs of both hands were amputated.

THE PRESIDENT'S ANNUAL ADDRESS

on *Helping or Hindering Nature*, was an earnest plea against possibly doing the latter while striving to do the former—and for withholding medicine in all cases where we cannot see a good reason for administering it—a reason based on exact knowledge of the diseased condition we seek to benefit by treatment. The Doctor condemned the use of aconite and veratrum in the treatment of inflammatory and febrile diseases, and believed these medicines ought never to be used internally, that in fact they are productive of harm just in proportion to the extent of their administration.

The following resolutions were adopted condemning

THE NEW YORK CODE:

Resolved, That this Society reaffirms its adherence to the principles of the Code of Ethics of the American Medical Association, and declares that, in its opinion, for a physician to extend professional recognition to irregular practitioners, is to patronize and encourage irregular practice, and is alike inconsistent with honesty of purpose and the pursuit of medicine as a science.

Resolved, That our representatives, at the approaching meeting of the American Medical Association, be and are hereby instructed to give their votes and influence in favor of unqualified adherence and fidelity to the Code as it now stands.

MISCELLANEOUS BUSINESS.

On motion, the Superintendents of the three insane asylums of the State were constituted a Committee on Nervous Diseases, to report at the next session, and the Committee on Pathology were instructed to inquire into the possibility of relationship and causation of erysipelas, diphtheria, and puerperal fever.

AN AMENDMENT TO THE CONSTITUTION

was passed to make the offices of secretary and treasurer permanent. The following were elected

OFFICERS FOR THE ENSUING YEAR:

President, Dr. T. P. Russell, of Oshkosh. *Vice-Presidents*, Dr. J. H. Vivian, of Mineral Point; Dr. D. Mason, of Milwaukee. *Secretary and Treasurer*, Dr. J. T. Reeve, of Appleton.

After the close of the formal business of the Society, a banquet, tendered by the profession and citizens of Mineral Point, closed the session in a very enjoyable manner.

MEDICAL SOCIETY OF THE STATE OF WEST VIRGINIA.

Fifteenth Annual Session, held at Wheeling, May 24 and 25, 1882.

(Specially reported for THE MEDICAL NEWS.)

THE fifteenth annual session of the Medical Society of the State of West Virginia, convened in Wheeling at 2 o'clock P. M., on May 24th, the President, DR. JAMES E. REEVES, being in the chair.

After prayer by Rev. D. A. Cunningham, D.D., the *Address of Welcome* was read by DR. GEORGE BAIRD, who also announced the programme prepared for the meeting, and took occasion to condemn personalities in papers presented to the Society, and hoped that such would not be indulged in at this meeting.

After calling of the roll, which showed the presence of about fifty members, Dr. B. B. Leonard, a delegate from the Ohio State Medical Society, was introduced and made a brief but pointed address. He was invited to participate in the proceedings of the meeting.

ELECTION OF NEW MEMBERS.

The following physicians were elected members of the Society, the Board of Censors having reported favorably, viz: Drs. James H. Love, of Grafton; W. S. Martin, of Kingwood; G. B. Moffett, of Parkersburg; G. H. Carpenter, of Moorefield; S. B. McCarrihan, of Moundsville; Leonard Eskey, of Benwood; T. O. Edwards, of Wheeling; J. W. Yater, of New Dale; N. H. Baker, of Webster C. H.; J. L. Fullerton, of Volcano; C. T. Richardson, of Charlestown; H. B. Baguley, of Wheeling; A. Dowler, of Sherrard; R. S. Donahoo, of Fairview; J. P. Fitch, of Morgantown; B. F. Harden, of Wellsburg.

REPORTS.

THE SECRETARY, DR. S. L. JEPSON, presented his report, showing an increase of eleven in the membership of the Society during the year.

The report of the TREASURER, DR. JOHN A. CAMPBELL, was read, audited, and ordered to be printed. It shows a balance of $130.47 in the Treasury.

DR. G. BAIRD, CHAIRMAN OF THE COMMITTEE ON PUBLICATION, presented a brief report, explanatory of the non-appearance of printed transactions for 1881. So few papers were read at the last meeting, that the Committee decided it would be better to print no transactions, but to publish the proceedings and papers of the last meeting together with those of the present session, after the present session adjourns.

DR. B. W. ALLEN of Wheeling, presented a brief report from the surgical division of the COMMITTEE ON NEW REMEDIES. He described the "surgical engine," and several other new instruments.

From the same Committee, Medical Division, DR. A. F. STIFEL, of Wheeling, presented a report, embracing an account of the properties and uses of jaborandi, quebracho, and resorcin.

PRESENTATION OF PAPERS.

DR. J. M. LAZZELL, of Fairmont, read an essay entitled *Quis Custodiet Custodes*, in which, among other points, the author took occasion to severely condemn the action of the New York State Society in permitting consultations with "irregulars."

DR. C. SHRIVER, of Bethany, presented a report on *State Medicine*, in which he spoke of the influence of sewer gas, the good work of our State Board of Health in protecting us from small-pox, advocated a State compulsory-vaccination law, and referred to frequent failures of bovine virus on ivory points and quill slips.

DR. D. PORTER MORGAN read a paper on *Retro-Displacements of the Uterus with Adhesions.*

DR. T. B. CAMDEN read an interesting and lengthy report on *Public Health, or Sanitary Science.* He referred to the existence of typhoid fever, diphtheria, and scarlatina in this and the neighboring towns during the past year, and attributed their prevalence to unsanitary conditions.

DR. T. O. EDWARDS, City Health Officer of Wheeling, in a few remarks, expressed a belief in the specific character of typhoid, and thought that the unusual prevalence of this disease here was due to the fact that much of the city had been inundated previous to the outbreak of the disease.

The Society took a recess until 7½ o'clock.

EVENING SESSION.

The Society was called to order by the PRESIDENT, who then delivered

THE ANNUAL ADDRESS.

DR. REEVES first presented a touching eulogy on Dr. H. W. Brock, an ex-President of the Society, who has recently died. He then spoke of the recent rapid strides in medicine; of the value of the microscope in practical medicine; of the improved character of modern medical literature; of the improvements in obstetrical procedures; of the growth of public sentiment in favor of public health measures. He lauded the State Legislators (and especially the six medical members, Dr. A. R. Barbee, of Point Pleasant, an ex-President of this Society; Dr. Isaiah Bee, of Princeton; Dr. B. F. Irons, of Pickaway; J. B. Crumrine, of Pennsboro; Dr. D. Q. Steere, of Pleasants; and Dr. W. H. Wayt, of Marshall), for their adoption of a wise State board of health bill, and told how useful the State Board had already been in protecting the State from any outbreak of variola, and in elevating the standard of medicine. The following is the number of legally qualified physicians now residing in the State, viz.: graduates of reputable medical colleges, 442; physicians who have been in continuous practice in the State for ten years, 358; physicians who have received certificates on examination by the board, 101; total, 901; of these 460 are regular, 11 homœopathic, and 23 eclectic. "Thus it is shown that our people, whose proud motto is *Montani Semper Liberi*, believe in tangible doses and sensible effects." The following extract of President Reeves' address will doubtless be of general interest.

It is shameful to acknowledge it, but the truth must be told, strike where it may, that in this great country of ours, notwithstanding the long and loud clamor for higher medical education and the establishment of a Medical College Association to encourage a longer, more uniform, and thorough college course of study, a diploma is not always proof that its possessor is a duly qualified physician, or that he has attended even one full course of lectures, or that he has ever attended lectures at all. In justification of this charge of bad faith on the part of medical colleges, I do not hesitate to furnish a case in point:

On the 13th of last January an applicant for a medica certificate, a resident of West Virginia, came before the District Board at Wheeling and failed to pass a satisfactory examination within the meaning of the law. Ten days later, or about the 23d of January, he knocked at the door of the *Graduating Class* of the Columbus Medical College, and was admitted. Within one month from that time he was graduated; and at the brilliant display at Comstock's Grand Opera House, on the evening of the 24th of February, he received his diploma!

I have it from an eye witness that he presented to the faculty "letters of recommendation from prominent gentlemen in West Virgina," and that in the distinguished graduating class (which was spoken of by some of the professors as one of the brightest and best which ever came from that school) "one man was graduated who did not know what the iris was, nor the pupil; could not locate the mitral nor tricuspid valves—placed the valvulæ conniventes in the *brain*, and the ileo-cecal valve in the *rectum!*" "There were several of that sort, but they are just now as much doctors (in Ohio at least) as you or I."

What an impressive, never-to-be forgotten scene at the commencement! The stage decorated with beautiful flowers—the orchestra discoursing sweet music, and stirring the hearts of the audience—the faculty, in double file, marching upon the stage—the 59 graduates taking their places in the front rows of the parquette—and the applause! and the bouquets! which greeted the new doctors!! It was most appropriate that a *prayer* was then and there offered.

But, unfortunately, this is not the only example that could be given of the ease with which college honors have been won by enterprising applicants. Some of the oldest and most reputable colleges in this country have, now and then, been guilty of relaxing their rules to accommodate *special* cases and thus done injustice to the profession.

He thought these facts were sufficient to demonstrate the necessity of the establishment of State Boards of Examiners. He then severely censured the New York State Medical Society for its action in permitting consultations with irregulars.

That the medical profession has fallen upon evil times, is unhappily shown by the recent action of a sister State Society, the State Medical Society of New York, which, under the pretence of "the demands of humanity" and "professional *liberality*," has convicted itself before "all the world and the rest of mankind" of the charge that *the prospect of a fee quickens both the perceptions and sensibilities* of a majority of its members.

Cupidity is one of the sins of medical men which tends to disgrace medicine, and it is the most damning evil of the profession. The wild rush for business, the low and despicable acts by which it is obtained, and the reckless desperation of the unsuccessful, are most humiliating evidences of the degeneracy of the times.

How absurd to talk of "consultations with legally qualified physicians!" which has the same meaning in the State of New York that it would have in West Virginia, where, as has already been shown, may be found quacks of all colors, and the veriest pretenders who have been *tolerated* under the ten years' exemption clause of our law.

With singular unanimity the secular press in all directions of the country has endeavored to mislead public opinion, by heralding the degradation of the State Medical Society of New York as a concession for the special privilege and benefit of homœopaths, when, in fact, the act of the Society means that its members have full license to consult with and give advice to not only homœopaths, but eclectics (a far

more respectable class of "doctors"), and all other irregular practitioners of medicine whenever and wherever the *consultation fee is secure*.

What is the object of a medical consultation? Certainly, to benefit the patient, who does not care a straw for differences of opinion concerning the name and pathology of his illness. What he wants and pays for, presumably, is the proper treatment of his disease, by which he can hope for recovery.

There is an impassable gulf between the practice of scientific medicine and the nonsense of homœopathy. The two cannot be made to harmonize—there is no common ground on which science and truth can meet a trade-name *clan* and deception; and the spectacle of a consultation between a regular physician and a homœopath concerning the treatment of a sick patient would be not less ridiculous than to behold Bob Ingersoll and De Witt Talmage, with minds and hearts professedly in unison, administering spiritual comfort and consolation to a dying man!

The line separating the true and the false, the honest and the dishonest, cannot be too sharply drawn, nor too rigidly maintained. Fortunately, the remedy, like the evil, is in the profession; and "the wisdom of the law is greater than the wisdom of any one man," or of forty men. The jurisdiction of our National Medical Congress—the American Medical Association—extends to every State and county, acknowledged as the representative body of legitimate medicine in America; its Code is high above all State Society rules, and no city, county, or State Society can reverse its power to legislate for its own protection and for the common good of the profession.

The Medical Society of the City of Wheeling, at a recent meeting, instructed its delegates to the American Medical Association to *stand fast* by the time-honored Code of Medical Ethics! I am confident this Society will do likewise, and thus renew its allegiance to the central and supreme authority.

In concluding, the President gave an urgent invitation to all regular physicians, not now members of the Society, to become members at once.

At the conclusion of Dr. Reeves' address, DR. A. L. GIHON, Medical Director of the U. S. Navy, was introduced, and delivered an extremely interesting address, entitled *Health; the True Nobility*. The address was listened to with great pleasure and profit by the large audience of ladies and gentlemen present, and the Society adopted the following resolution offered by Dr. Jepson.

Resolved, That the thanks of this Society are hereby tendered to Dr. A. L. Gihon for the very great pleasure afforded us in listening to his interesting, eloquent, and instructive address.

SECOND DAY.—MAY 25TH.

The Society convened at 10 o'clock A. M., President Reeves in the chair.

From the *Committee on Necrology*, a report was presented, giving a biographical sketch of the late Dr. H. W. Brock of Morgantown. The report was prepared by Dr. L. C. Hunt, chairman, and in his absence read by the Secretary. Dr. Brock was an ex-President of the Society, a frequent contributor to its transactions, and one of the ablest physicians and surgeons in the State. He was very highly esteemed, and his death is deeply deplored. He for many years held the position of Professor of Anatomy, Physiology, and Hygiene in the State University, and was also a member of the Board of Regents. He was a delegate from the American Medical Association to the late International Medical Congress in London. Dr. Hunt's report was ordered to be printed.

DR. JOHN FRISSELL, of Wheeling, read a lengthy and interesting paper entitled *Some Thoughts on Hygiene*, in which he took the position that too much importance is given to filth as a cause of disease. It is not the only nor chief cause of so-called "filth diseases." Sanitary efforts do not modify the outbreaks of such diseases as much as claimed. He spoke of the dangers of modern houses with sewer connections; quoted from Willard Parker to show that there are many kinds of malaria ("bad air"), and finally made the point that "filth" in earth, air, and water *is* a very potent factor in the causation of disease.

DR. S. L. JEPSON, of Wheeling, read a paper entitled

CLINICAL NOTE ON TYPHOID FEVER.

"The unusual prevalence of typhoid fever in this city since last summer has suggested an examination into the mortality from this cause in former years. No accurate death reports were prepared prior to 1873, owing to an imperfect city registration ordinance. By an examination of my own records while City Health Officer, and those kindly furnished me by our present obliging Health Officer, Dr. T. O. Edwards, I am enabled to present the following table, showing the total annual mortality from all causes since 1873, the annual mortality from typhoid fever, and the relation the latter bears to the former:

Years.	Mortality from all causes.	Mortality from typhoid fever.	Relation of typhoid mortality to total mortality.
1873, . . .	410	39	9.05 per cent.
1874, . . .	396	18	4.54 "
1875, . . .	482	22	4.56 "
1876, . . .	611	31	5.07 "
1877, . . .	508	15	2.95 "
1878, . . .	482	31	6.43 "
1879, . . .	581	14	2.40 "
1880, . . .	590	52	8.81 "
1881, . . .	662	75	11.37 "
1882, . . .	132	27	20.45 "

"During the last quarter of 1881, and the first quarter of 1882, the total mortality was 307; the mortality from typhoid fever, 66; the latter being 21.49 per cent. of the mortality from all causes. This table shows not only the constant prevalence of typhoid fever in this city during the past ten years, but also its great increase from 1879 up to the present year, a condition of things which, in view of the fact that this disease is always classed among "preventable diseases," is rather humiliating if not actually disgraceful. During the past year typhoid was not confined to the city, but seems to have prevailed more extensively than for many years, not only in the country districts of this county, but also in surrounding counties."

The author then detailed several cases in which unusual features presented, cited the fact that the fever has here often pursued a non-typical course, that a normal temperature sometimes occurs even in the second week of the disease, that great stupor and a low temperature have sometimes co-existed; he referred to cases terminating suddenly during convalescence, from failure of the heart, emphasized the importance of *early feeding* of typhoid patients, cited cases in which mental delusions occurred during convalescence, and finally spoke of having seen several cases of phlegmasia dolens from thrombosis in the femoral vein.

DR. R. W. HALL, of Mannington, presented a written report of a case of *Placenta Prævia*. A dead child was delivered by turning; the mother recovered. Verbal reports of similar cases were made by Drs. Edwards, Leonard, and Ulrich.

AFTERNOON SESSION.

The following gentlemen were on motion invited to participate in the proceedings of the Society, viz.: Drs. A. H. Hewetson, of St. Clairsville, Ohio; Hobson, of Flushing, Ohio; and Weirich, of Martin's Ferry, Ohio.

DR. E. A. HILDRETH, of Wheeling, read a paper on *Relations of Meteorology and Disease.*

ELECTION OF HONORARY MEMBERS.

Dr. B. B. Leonard, of Ohio, and Dr. A. L. Gihon, U. S. Navy, were unanimously elected honorary members of the Society.

DR. GIHON thanked the Society for the honor conferred upon him, and said he had taken peculiar pleasure in attending this meeting, because of the prominence given to sanitary subjects. Naval medical officers, the Doctor said, were eminently sanitary officers. He thought the West Virginia Society had given more attention to this important field of the profession than any similar society whose meetings he had attended. He regarded this as an augury of the advanced position taken by the profession in this State.

DR. LEONARD also returned thanks very briefly, and expressed the hope that the relations between himself and the Society might be of such a nature in the future as to give the members no cause of regret for their present action.

RUPTURE OF THE PULMONARY ARTERY.

DR. S. B. STIDGER, of Moundsville, read an account of an autopsy in a case of sudden death of a man, æt. fifty-two years. The aortic arch and also pulmonary artery were found to be dilated and thin, and there was "a rupture in the pulmonary artery about three lines in length just below its bifurcation and within the pericardial sac." There had been no suspicion during life of the existence of any cardiac disease.

A Report of Cases of Ovariotomy, by DRS. T. A. HARRIS, of Parkersburg, and W. H. SHARP, of Volcano, was read by Dr. C. E. Myers, of Wheeling.

DR. C. F. ULRICH, of Wheeling, read a paper on *Our Drinking Water—its Influence on the Public Health.* The writer attributed the prevalence of zymotic diseases in this city to the contamination of the drinking water with sewage flowing into the Ohio River above the point where the water works are located.

A paper prepared by DR. W. H. SHARP, of Vulcano, *Report of Five Hundred Consecutive Cases of Midwifery*, was read by title.

Dr. J. A. Campbell read a paper prepared by DR. L. D. WILSON, of Wheeling, on *Intestinal Occlusion.* A case was reported with autopsy at which the omentum was found extending into an old hernial sac to which it was strongly adherent; the ilium at and above its junction with the cæcum was empty and collapsed, and several coils adherent; higher up there was a sharp bend in the bowel, above which it was much dilated. Within the angle of the occluded knuckle of the intestine was an old cicatrix about one inch in length, the contraction of which had no doubt given rise to the sharp angle which existed, and also to the stricture formerly permeable, but which recent inflammation with consequent adhesions had rendered so impermeable that even air could not be forced through it.

The author appended interesting remarks, noting the points of similarity and difference in the symptoms observed in the above case, and those presenting ordinary intestinal obstruction.

THE NEW YORK CODE.

The following preamble and resolution were offered by Dr. J. M. Lazzell, of Fairmont, and unanimously adopted:

Whereas, The action of the New York State Medical Society, at Albany, recently, in changing the historic code of ethics, requires some notice from this Society, therefore,

Resolved, That the Medical Society of the State of West Virginia hereby instructs its delegates to the American Medical Association, which meets at St. Paul, in June, to stand by and defend our ancient and honored code of ethics.

MISCELLANEOUS RESOLUTIONS.

A resolution was passed instructing the Committee on Publication to prepare an index for the transactions since 1874, and append it to the next volume.

The usual resolutions of thanks were adopted.

The Society was invited to hold its next annual session at Grafton, and also at Fairmont; the former city was chosen.

The following were then elected

OFFICERS FOR THE ENSUING YEAR:

President, Dr. B. W. Allen, of Wheeling. *Vice-Presidents*, Dr. W. L. Grant, of Grafton; Dr. J. H. Manown, of Kingwood; and Dr. C. Shriver, of Bethany. *Board of Censors*, Drs. D. Porter Morgan, J. M. Lazzell, L. D. Wilson, J. H. Pipes, Wm. Frey, W. S. Martin, and J. B. Reed. *Secretary*, Dr. S. L. Jepson, of Wheeling. *Treasurer*, Dr. John A. Campbell, of Wheeling.

The President announced the appointments of committees to report at the next meeting and before.

In parting with the members of the Association, he expressed his pleasure at the harmonious and profitable session of 1882.

He then declared the annual session ajourned.

In the evening a grand concert was given at the Academy of Music in honor of the State Society, which was followed by a banquet at the St. James Hotel. Both these entertainments were given by the members of the State Society residing in Wheeling.

Thus closed the largest, most profitable, and pleasant meeting in the history of the Society.

MISSOURI STATE MEDICAL ASSOCIATION.

Twenty-fifth Annual Meeting, Hannibal, May 16, 17, and 18, 1882.

(Specially reported for THE MEDICAL NEWS.)

THE twenty-fifth annual meeting of the Missouri State Medical Association was held at Hannibal, on May 16, 17, and 18, DR. WILLIS P. KING, of Sedalia, President, in the Chair.

A STATE BOARD OF HEALTH.

A memorial drafted by the Standing Committee on Medical Legislation was accepted and ordered to be presented to the next legislature. This memorial calls for the establishment of a State Board of Health, to consist of a member (appointed by the Governor) from each Congressional district, who shall be eminent "in his profession as a scientist or a practising physician." This body shall have subjected to its approval the curriculum of study in the medical schools of the State, and at least two of its members shall be present at examinations for the degree of M.D., which must be satisfactory to them. The Board shall be authorized to designate two scientists, whose duty it shall be to investigate and report upon destructive diseases affecting men or the domestic animals, etc.

A resolution was introduced and adopted, requiring the Secretary to obtain, so far as practicable,

A LIST OF MEMBERSHIP OF ALL LOCAL MEDICAL SOCIETIES

in the State, and to have the same printed in the Transactions. The effect of this publication will be to

strengthen local organizations, and to give an authentic list of the members of the profession in the State.

THE NEW YORK CODE.

The action of the Medical Society of the State of New York, at its last annual session, in respect to the Code of Ethics, was severely and uncompromisingly condemned as having no other outcome than the obliteration of all distinctions between medical men and charlatans. In fact, the general feeling was that such a radical change in the most essential part of the Code would reduce the profession to the level of a mere trade, with the utter destruction of that high-minded and truly scientific spirit which is the chief glory and safeguard of our body. The sense of the Association upon this subject is sufficiently given in this resolution, that was unanimously adopted:

Resolved, That we view with regret the action of the Medical Society of the State of New York, at its last annual meeting, in reference to the Code of Ethics, and hereby record our decided disapproval of said action, and reassert our conviction of the importance and appropriateness of the present Code of the American Medical Association for the guidance of physicians in their conduct towards each other and to the public.

Resolved, That a copy of this resolution be presented at the meeting of the American Medical Association, at St. Paul, and that it also be offered for publication to the medical journals of our State.

THE PRESIDENT chose for the subject of his

ANNUAL ADDRESS

Quacks and Quackery in Missouri, which he dealt with in his usual trenchant and practical manner. That well-known character, the "advertising quack and swindler," is thus capitally sketched: "He has within him all the elements that go to make up the successful gambler or burglar. He chooses the practice of medicine for an occupation, rather than that of burglary, because the law protects him in the one, but not in the other. His office is hung with forged diplomas, and with pictures representing surgical cases that he pretends to have operated upon, and his pigeon-holes are full of certificates of cure written by himself. He advertises to cure all diseases, and makes a *specialty* of diseases of the eye, ear, throat, nose, and lungs, diseases of the mind and nervous system, diseases of children, consumption, piles, gynecology, and fits."

In order to ascertain the exact condition of medical practice throughout the State, the Doctor had issued printed circular letters in which several questions were clearly stated. The information thus obtained is in some respects startling enough: 4834 persons "practice medicine" in Missouri, only 2546 being graduates of respectable schools; 1904, by competent judges, are deemed to be utterly incompetent. One of the questions in the circular asks: How many deaths (approximate) do you think occur annually in your county in consequence of the neglect, ignorance, and incompetence of those in medical charge? The sum of all answers amounts to *5570 deaths annually*. From answers, the Doctor thinks it not too extravagant to state the amount of money paid annually to quacks in Missouri to be largely over $1,000,000. A number of special cases of gross and culpable ignorance and presumption are detailed. The whole makes a most powerful appeal for stringent legislation and reform. He closed by suggesting the proper methods for clearing out this Augean stable, and it is sincerely to be hoped, for humanity's sake, that his labors will not have been in vain.

Two thousand extra copies of the Address were ordered to be printed for general distribution.

Among the other reports and papers read may be given the following:

PHLEGMASIA ALBA DOLENS.

DR. V. P. SCHENCK, of St. Louis, gave an exhaustive account of the history and treatment of this disease. He prefers to accept the theory of lymphatic origin rather than that which refers the symptoms to structural change in the nervous trunks. Treatment of the swollen limb by bandages is so universal that its advisability is no longer questioned. But the questions remain, when to apply the bandage, how to apply the pressure, and what sort of bandage to adopt. The author has found Martin's rubber bandages to be most efficacious, and urges their general use.

REPORT ON RAILROAD SURGERY.

DR. J. W. TRADER, of Sedalia, said that, as a class, railroad injuries assume a gravity that is not likely to obtain in injuries incurred in the ordinary avocations of life. Instead of simple fractures there is apt to be, with the fractured and badly bruised bone, more or less complete disorganization of muscles, vessels, and nerves, even though the skin be unbroken, but exhibits a bluish ecchymosed appearance. In such cases amputation must be necessarily performed as soon as the first shock is rallied from. Victims of railroad wrecks may have suffered fatal internal injuries without any very obvious external hurt. The patient may be found writhing with pain. Careful external examination discovers no lesion. Pulse is very feeble, complains of intolerable pain in back and thighs, the spinal column presents nothing abnormal, patient cannot urinate, the catheter draws off a few drops of bloody urine, abdominal pain soon sets in. This is a case of ruptured bladder, probably, and fractured pelvis. In cases of concussion, with compression of the brain and possible fracture of the base of the skull, recovery may take place "if you keep the doctors away."

As an anæsthetic in operation, Dr. Trader most emphatically recommends pure chloroform. When an amputation is required, care must be taken to operate above the disorganized tissues; it is well to cut into parts that will bleed freely. But conservative surgery has no more extensive field than in the domain under consideration.

REPORT ON DISEASES OF CHILDREN.

DR. J. P. KINGSLEY, of St. Louis, in the course of this report, dwelt upon the confusion that still exists in the profession in regard to the differential diagnosis of measles, scarlatina, and rötheln. He had reported thirty-eight cases treated by himself during a late epidemic, and had detailed the peculiarities—short period of incubation; papular character of eruption; absence of coryza, bronchitis, and profuse lachrymation; enlargement of the cervical glands; general mildness of symptoms. An attack of German measles does not secure immunity against scarlatina or measles. He has failed to obtain from the use of pilocarpin in diphtheria the benefits that had been so urged. In treatment of whooping-cough, he found some relief afforded by the occasional diffusion in the air of the chamber of chloroform by means of the atomizer. Potassium bromide and chloral had been effective in modifying the severity of the cough and insuring rest at night.

SULPHATE OF QUINIA—ITS USE AND ABUSE.

DR. GEORGE M. DEWEY, of Keytesville, severely censured the indiscriminate prescription of quinia. "If malaria had as firm a hold upon our bodies as it has upon our minds, our condition would be deplorable indeed. . Quinia is anti-periodic, anti-pyretic, anti-phlogistic, anti-pyetic, anti-bacteric; consequently it will prevent or cure nearly all our maladies. We sneer at our fathers for making such a mixture of calomel, liver, and bile in their theory of practice. Has the substitution of

quinia for calomel added many years to human existence? Are decayed teeth greater afflictions than shattered nerves? Is quinia an exception to the rule that a medicine potent for good is also potent for evil?" "Diabetes prevails mostly in what are called malarious regions, and in subjects who have had many attacks of ague, and consequently taken much quinia. May we not reasonably infer that quinia, by producing congestion of the fourth ventricle, is responsible for the diabetes?" The Doctor questioned the value of quinia as a simple tonic, quoting authority in his defence, and deprecates the wholesale squandering of this valuable drug on that theory. As regards the view that quinia should be given every parturient woman to avert septicæmia, the Doctor suggested that the only curse imposed upon the first mother was that she should bear in sorrow and in pain; nothing was said about septicæmia.

CASE OF HYDROPHOBIA.

DR. L. J. MATTHEWS, of Carthage, in this report gave a careful account of the whole course of a case of hydrophobia, closely observed and symptoms accurately noted. A girl, aged five years, March 18, 1882, was bitten in the lower lip by a dog not at all suspected of rabies; the nose was also slightly abraded. The wounds healed promptly under simple dressing, and nothing more was thought of the accident. April 19, the child complained of the throat, and seemed to have taken a cold, the weather being raw and she having been playing out of doors two days before. There was fever, rapid pulse, some pharyngeal redness. The usual remedies for a cold were prescribed. Next day, the Doctor learned that she had had "attacks of vomiting" whenever it was attempted to administer medicine, had been very nervous, and had not slept; she could not lie down, but sat in the lap of her nurse. The Doctor found upon trial that a clonic convulsion immediately followed when she was laid upon the bed, which ceased when the upright position was resumed. He at once suspected the true state of things, when as he himself attempted to administer liquid, general spasm ensued, and the medicine was forcibly ejected from the mouth. The case soon proved fatal. Dr. Matthews reported the case as proving most conclusively that hydrophobia is not a disease of the imagination. The age of the child, the total lack of suspicion of the actual condition of the dog (which was killed at once), all preclude the theory of mere mental affection.

TREATMENT OF POTT'S DISEASE EXISTING IN THE UPPER DORSAL AND CERVICAL REGION.

DR. A. J. STEELE, of St. Louis, stated that in caries of the upper dorsal region he makes use of a rigid jacket that extends to the base of the neck, covering the entire chest, and reaching down to the lower border of the ribs, leaving the abdomen free for respiration and the lumbar vertebræ for motion. The lower limit of the jacket for the stated objects was first suggested by Dr. Gehrung, of St. Louis, and answers admirably. If the spinal disease be above the fourth dorsal, the vest alone will not suffice; the head-rest so attached to the vest as to carry the weight upon the shoulders must be resorted to. This method is preferable to that of Sayre, which confines the abdomen and chest, and transfers inefficiently the weight of the head to the hips. Dr. Steele, instead of plaster, uses half-tanned sole leather for the jacket, as proving better in practice than plaster, rawhide, etc. A mould is to be made of the body with plaster (bandage); from this mould a plaster cast is taken, upon which can be formed the jacket, of whatever material that may be chosen. The leather, softened in water, can be applied and kept in place till dry. Half-tanned leather is firmer than whole-tanned, and more pliable than raw-hide. To finish, ventilating holes should be cut in the vest; the outer surface should be varnished; the edges bound with chamois; and along the anterior opening, hooks attached for lacing.

Strips of thin metal can be fastened to the outer surface, if at any part greater strength is needed; also other apparatus can readily be attached as desired. Of course, the plaster cast can be altered to affect shape of vest so as to alter local pressure.

CASE OF MENINGOCELE.

DR. E. J. WARTH, of Nevada, related the case of a well-developed male child, March 22, 1882, born naturally at full term, who exhibited a meningocele measuring around pedicle 3 inches, around greatest circumference 12 inches. At first the tumor contained a clear liquid, but in a day this had become opaque; there had been no medical or surgical interference. May 14th, the Doctor found the sac occupied by a fungoid growth almost as large as the original tumor. From the mother he learned that three days after birth three purple blisters appeared on the tumor, which burst on the fourth day, discharging blood. Four weeks later about a pint of clear water was discharged and about half a tea-cupful of bloody liquid. Ten days later another discharge, which has persisted to date. There is an opening half an inch in diameter into the sac through which the fungoid mass protrudes.

CASE OF CONGENITAL TUMOR OF THE THYROID GLAND.

DR. A. W. MCALESTER, of Columbia, related the history of a girl ten days old, who exhibited an irregular, lobulated, translucent tumor extending from angle of jaw, right side, to median line of neck anteriorly, and a little beyond and from the jaw to clavicle. The child did well for three months, when it began to emaciate, the tumor growing. It died during an attack of pneumonia. A post-mortem was made. The tumor burrowed extensively among the structures of the neck and had considerably increased in size. The right lower border of inferior maxilla was partially absorbed from angle to symphysis. The tumor weighed two pounds, and was partly cystic, partly solid. Evacuating the cysts, the weight was reduced to one pound.

NOTES ON VACCINATION AND INOCULATION.

DR. R. F. BROOKS, of Carthage, gave his experience during the winter's epidemic of small-pox, in the use of virus. He found the "points" charged with bovine virus sent him, to be often very uncertain in effect, in some packages of 15 points freshly obtained "hardly one of the whole" proving active. The packages were obtained from a well-known and responsibe house, and warranted to be fresh. He followed the prescribed rules with the utmost faithfulness.

He collected from neighboring physicians cases that, with his own, numbered 488 vaccinations. Bovine virus and human were used, the latter caused most local irritation; of the former the chief complaint was that it "did not take" well. In 70 primary vaccinations with human scab, there were but 10 per cent. of failures.

ACTION ON THE DEATH OF DR. HODGEN.

A part of the proceedings that elicited most general interest, was the passage of resolutions expressive of the deepest regret over the death of Prof. John T. Hodgen M.D., of St. Louis, whose loss in the zenith of his fame is a blow to the entire profession.

MICHIGAN STATE MEDICAL SOCIETY.

Annual Meeting, held at Ypsilanti, May 10 and 11, 1882.

(Specially reported for THE MEDICAL NEWS.)

THE seventeenth annual meeting of the Michigan State Medical Society began its session at Ypsilanti, on

Wednesday, May 10, DR. J. H. JEROME, of Saginaw, President, in the chair.

PUBLICATION OF THE TRANSACTIONS.

DR. GEORGE E. RANNEY, Secretary, read the Publication Committee's report recommending that the proceedings of the meetings be printed as usual.

DR. BRODIE, of Detroit, urged that the proceedings in future be printed in the different medical journals of the State, for, he said, before the pamphlets could be got out, the articles were usually very stale. The printing of the proceedings of the past meetings had taken six months, while by allowing a journal to print them they could be placed before the public within thirty days.

DR. RANNEY stated that the delay in the publication of the transactions of the meetings always grew out of the fact that the authors of the papers retained them in their possession for revision before allowing them to be published; and that if each paper was ready for publication whenever read, there would be no such delay, and they could be in the hands of the public in thirty days from the time they were read.

DR. DUNSTER offered the following resolution:

Resolved, That a copy of every paper read before the Society shall be placed in the hands of the secretary before the adjournment of the meeting at which the paper is read, and, if the transactions of the Society are not published within thirty days subsequent, the authors may publish their papers in any medium they may see fit.

The consideration of this resolution was deferred until the next day.

NEW MEMBERS.

The committee on membership reported the following names as acceptable for membership:

Dr. John W. Monaghan, Detroit; Dr. Geo. D. Stewart, Detroit; Dr. C. G. Jennings, Detroit; Dr. O. W. Owen, Detroit; Dr. F. E. Stewart, Detroit; Dr. C. A. Devendorf, Detroit; Dr. Albert Yates, Washington; Dr. Henry J. Reynolds, Orion; Dr. C. M. Stockwile, Port Huron; Dr. J. M. Collier, Plymouth; Dr. Chas. Hincks, Plymouth; Dr. Samuel Cotton, Tecumseh.

SECRETARY'S REPORT.

DR. RANNEY, secretary, read his report. He said that the following members had died during the past year: Drs. B. Barnum, W. H. Elliott, Chas. H. Sackrider, D. C. Hunkhurst, and John Day.

Seven hundred copies of the transactions of the last meeting were printed, of which number six hundred have been distributed, leaving one hundred on hand. Four hundred notices of the present meeting had been issued. He stated at length all the minor expenses incurred, and the general working of the Society. The report was accepted.

TREASURER'S REPORT.

DR. G. W. TOPPING, treasurer, read his report. Last year there was $562.15 of a balance on hand, and the total receipts during the year were $283.94, making the total amount of money received during the year $845.64. The expenses during the same period amounted to $343.31, leaving a balance on hand of $502.33.

The treasurer recommended that the annual dues should be reduced, as he thought by so doing it would not endanger the solvency of the Society. The report was adopted.

DR. E. P. CHRISTIAN, of Wyandotte, gave a history of *Two Cases of Malpresentation*. In the first case the head and buttock presented together; and in the second case a leg and the head presented, evolution took place, and the feet coming down, the child was rapidly delivered with forceps.

DR. BURR, of Pontiac, read an interesting paper on *The Insanity of Masturbation*. He described some very instructive cases which had been brought to the Eastern Insane Asylum. He spoke particularly of the change which masturbation always brought about in young men, and warned parents to be watchful, and if they noticed a growing shyness or timidity in young people to find out the cause of it immediately. He spoke hopefully of the treatment. In most cases a cure followed appropriate treatment and care.

DR. CONNOR, of Detroit read a paper on *Optic Neuritis Considered in some of its Relations to Cerebral Tumors*. He spoke of the intimate relation of the eye and brain, of the pathological conditions which follow injuries and disease in either organ, of the improved methods of investigating these organs, of the obscure symptoms which sometimes present, and of the method of treatment which appeared to benefit the patients. He spoke of the sympathy which existed between the eye and brain, and gave the history of a very interesting case.

DR. WARD, of Laingsburg, read an exceedingly interesting serio-comic poem entitled *Æsthetics of Medicine*. In his own style and way, graphically, he described the relations of doctor to patient, and of patient to doctor and physic. He humorized on the new-fangled ways and means of the present day, and on the meaningless notions which had taken possession of the professional brain. The paper was well received, and as a medical curiosity will take first rank.

DR. SHURLEY, of Detroit, presented a paper on *Laryngeal Phthisis*. He recognized the fact that this disease was notoriously fatal, yet he thought that much good could be done by palliative treatment. He could not give any treatment applicable to all cases, but thought we might, by careful investigation, find some means to benefit patients suffering from this disease. He thought that steam and spray were valuable remedies of themselves, but that anodynes could be used to better advantage when combined with them. He was favorable to the use of counter-irritation and perhaps tracheotomy.

DR. T. N. REYNOLDS, of Detroit, read a paper on *Cold Air in Measles and Scarlet Fever*. He proposed to have the sick room well ventilated, but would keep the patient warm in bed by means of plenty of bedding. He did not fear cold air in these cases if the patients were comfortably warm.

DR. WADE, of Holly, read a paper on *Antisepsis in the Treatment of Disease*. He gave the history of experiments relating to fermentative causes of disease, and thought that means should be employed in all cases to prevent fermentative changes both in the body and out. He spoke of disease and the relations which that condition often bore to germs and organisms outside of the body. Alcohol, turpentine, iron, carbolic acid, chloral, bromine, and mercury, were antiseptic remedies of great value; salicylic acid, boracic acid, sulphurous acid, benzoic acid, and chlorine, were all valuable germ destroyers; chlorate of potassium, iodine, iodoform, permanganate of potassium, were entitled to confidence as the most active remedies at our disposal to destroy diseased germs and organisms. He gave at some length the different articles which he had found of service in cases requiring antiseptic remedies, and of the confidence which he had in these remedies to protect his patient against the poison so often engendered.

DR. EUGENE SMITH, of Detroit, read a paper entitled *Suppurative Catarrh of the Middle Ear*. He mentioned the frequency of this disease as a complication of scarlet fever, and of the brain complication which often followed. Two cases had recently occurred in Detroit of death following catarrh of the middle ear.

He spoke of the intimate connection of the brain and tympanic cavity, and showed how easily inflammation could be transferred from the membrana tympana to the meninges of the brain.

DR. REYNOLDS, of Orion, read a paper on the *After-Treatment of Tracheotomy Cases*. He recommended a prompt operation, a large-size canula, a large atomizer to be kept constantly going near the patient, a warm moist atmosphere, he thought about 95°, and that the canula be kept well cleaned, and the patient well nourished.

DR. J. A. POST, of Lansing, presented a paper on *Urinary Deposits, and their Relations to Health and Disease*. He classed the deposits as crystallized and non-crystallized. Under the first head he discussed blood, bile, spermatozoids, casts, etc., and under the second he placed all of those substances which appear in the urine as crystals. He seemed to think that most deposits of the latter class came from faulty digestion.

DR. GEORGE E. RANNEY, of Lansing, presented a paper entitled *Clinical Notes on Uterine Tumors*. He explained something of the dangers and difficulties encountered in such cases, and detailed at some length three cases which came under his care. He had removed a large fibroid with a Smith's écraseur, breaking two cable cords, and, as a last resort, used a wire taken from a piano. One case was of much interest, inasmuch as the pressure of the tumor had interfered with the supply of blood to the uterus, and the uterus had slowly atrophied.

At the evening session the PRESIDENT, DR. JEROME, delivered the *Annual Address*.

DR. C. H. STOWELL, of Ann Arbor, gave a very instructive and entertaining exhibition of microscopic slides, showing healthy and pathological tissues by means of lime-light and magic lantern with microscopic attachment.

MAY 11TH.

DR. COX, Chairman, presented the following

REPORT OF THE COMMITTEE ON NOMINATION.

Vice Presidents, Drs. S. S. French, of Battle Creek; Hugh McColl, of Lapeer; L. W. Bliss, of Saginaw; and A. Stevenson, of Adrian. *Secretary*, Dr. G. E. Ranney, of Lansing. *Treasurer*, Dr. A. R. Smart, of Hudson. *Judicial Council*, Drs. J. H. Bennett, of Coldwater; W. F. Breakey, Ann Arbor; William Brodie, Detroit.

The report was accepted and the nominees were duly elected.

For *President*, the following nominations were made in open convention: Dr. Tupper, of Bay City, nominated Dr. G. W. Topping, of De Witt; seconded by Dr. Burr, of Pontiac. Dr. Brown, of Monroe, nominated Dr. A. F. Whelan, of Hillsdale, and Dr. Hitchcock seconded the nomination.

Dr. Smart, of Hudson, favored the latter nomination greatly, as, he said, that tract of country lying south of the Michigan Central railway never had a representative elected president of the society, and he thought it should have a representative to fill that office this year. The society had a good chance to elect one of the best members to be their president, and also to give the country south of the railway a fair show.

Forty votes were cast, of which Dr. G. W. Topping received twenty-three, and he was declared elected.

DR. FOSTER PRATT then read a paper entitled "*Responsibility of the Profession for Non-union of Fractures*," giving the history of a case, "Burgert vs. Lake," in which the defendant, a doctor of Allegan County, was sued for damages by Burgert for malpractice, in failing to set a fractured arm so as to make the bones heal together. He criticised the evidence given in the case by Dr. Maclean, who, he alleged, had attributed the non-union to bad surgery, while it was caused by the physical condition of the prosecutor, Burgert.

The paper was ordered to be published in the proceedings of the meeting, and the privilege was granted Dr. Maclean to write a reply to be published in the volume of *Transactions*, in which Dr. Pratt's paper would appear.

THE COMMITTEE ON FINANCE

reported that they had examined the report of the treasurer and the vouchers accompanying the same, and find them correct, and that there is in his hands at the date of this report $502.33; also the report of the secretary, and find his accounts correct. The committee recommend that no action be taken at this term relative to reducing the dues for members. The recommendation was adopted.

The following resolutions were adopted concerning the

DISPOSITION OF PAPERS

read before the Society:

Resolved, That papers read before this Society and referred to the Committee on Publication, with instructions to publish, shall at the close of the session be placed in the hands of the Society ready for printing.

Resolved, That any member reading a paper before the Society is allowed to have such paper printed in any reputable medical journal, after 60 days, under the statement, viz., "Read before the Michigan State Medical Society, and printed in this journal with the consent of the Society."

After the induction of the President-elect the Society adjourned.

CORRESPONDENCE.

THE LEGAL VIEW OF THE NEW CODE.

To the Editor of THE MEDICAL NEWS.

SIR: As the opinion of a lawyer has been imported into this discussion of the New York Code of Ethics, there are two or three questions connected with the new departure in medical morals which this querist may properly be requested to answer, for they are more immediately pertinent to his professional knowledge.

The new Code provides as follows: "Members of the Medical Society of the State of New York, and of the medical societies in affiliation therewith, may meet in consultation legally qualified practitioners of medicine." Who are legally qualified practitioners of medicine? Judge Daly, of New York, says: "In the absence of special statutes, the law does not exclusively recognize any particular system of medicine, or class of medical practitioners." Ordronaux adds that in the absence of any statutes . . "the term physician may be applied to any one who publicly announces himself to be a practitioner of this art" . . . "Every one undertaking to treat the sick professionally, and as the exercise of his vocation, is legally a physician." As this new code of medical morals was designed to be of general application, and is so regarded by Mr. Dwight, what will be the moral standing of the medical profession in the States that have no special statutes defining the qualifications of legal practitioners?

For thirty years preceding 1874, the State of New York had no statute on this subject, and every person who chose to treat the sick professionally, and as in the exercise of his vocation, was a legally qualified practitioner. Now, we desire to ask the eminent counsellor—than whom, we are assured by Dr. C. R. Agnew, "no one in America is better fitted to look at the question involved without prejudice, and in the good light of pure ethics"—under these circumstances does "courtesy to State authority" require a State Medical Society to recognize the fitness for association of every

one practising medicine? If he answer in the affirmative, as his argument leads us to infer, he must, we can only assure him and Dr. Agnew that the united voice of the medical profession of the world is against them. Nothing preserved the honor, and dignity of the profession during that dark period in the history of New York, and nothing preserved it in States which have now no statutory educational qualifications of medical men, but the old code of ethics.

Again, let us inquire of this eminent jurist, what is the legal status of two medical men in counsel who practise according to opposite dogmas? If one believes in *similia similibus curantur*, and the other in *contraria contrariis curantur*, and the former yields to the latter, or the latter to the former, what will be the position, in Court, of the one who yields and practises according to the opposing dogma? Judicial decisions are to this effect: "A person professing to follow one system of medical treatment cannot be expected by his employer to practise any other. While the regular physician is expected to follow the rules of the old school, in the art of curing, the botanic physician must be equally expected to adhere to his adopted method." "Whatever may be the school or system of medicine to which a physician belongs, the law presumes consistency between his profession and his practice, for, where there are different schools of practice, all that any physician undertakes is, that he understands and will faithfully treat the case according to the recognized law and rules of his own particular school." "If a practitioner of one school of medicine, being employed through predilection for that system by any person, treat him according to a different and opposite system, either with or without his consent first had and obtained, he inferentially admits his want of that ordinary skill belonging to his calling, and thus perpetrates a fraud upon the public."

From these quotations it is apparent that every physician is bound by the civil obligations to treat his patient according to the tenets of his school, and the adoption of any other system, even with the consent of the patient, would be a fraud. What avails in law, then, a consultation between physicians of opposing schools? The answer is, plainly, nothing but fraud. The law in this regard is iron-clad, and so should be our rules of ethics. The plea that we should sacrifice the honor and dignity of our profession at the "demands of humanity," is as shallow as it is impertinent. What medical man was ever known to fail to meet an "emergency?"

The appearance of the advocates of the New York Code of Ethics in the medical forum, accompanied by a lawyer to protect them from the criticism of their brethren, seems to us the last resort of those who cannot defend themselves by legitimate argument. Nothing could be more incongruous than the opinion of a lawyer on a question of medical morals. To obtain such an opinion, and put it forward as the best defence that can be made of the new Code, is in itself an admission of the weakness of the cause which Dr. Agnew has espoused, and for which he is willing, in common with "the friends and advocates of liberty" in by-gone ages, to be "gibbeted," gratified that it will soon be over, and then comes the reward. From present appearances, this gibbeting process will not soon be over, nor will the "pure results" which he expects to gather "out of the embers," when "the flames of unjust criticism die out," be such as he anticipates. The "new departure," which is designed to liberalize our professional morals, so that we may consort with every form of quackery, and still maintain our respectability, will probably be left to but very few to follow.

Yours, respectfully,

A PRACTITIONER.

NEWS ITEMS.

HEMPSTEAD, LONG ISLAND.

(*By Telegraph from our Special Correspondent.*)

THE QUEEN'S COUNTY (N. Y.) MEDICAL SOCIETY AND THE NEW YORK CODE.—At the annual meeting of the Queen's County Medical Society, held May 30, the following resolution was adopted:

Resolved, That the Queen's County Medical Society, in convention assembled, utterly repudiate section second, governing consultations, of the revised Code of the New York State Medical Society, and will not be governed by it.

STONY POINT, NEW YORK.

(*By Telegraph from our Special Correspondent.*)

THE ROCKLAND COUNTY (N. Y.) MEDICAL SOCIETY AND THE NEW YORK CODE.—At the annual meeting of the Rockland County Medical Society, held May 30, the revised Code of Ethics of the New York State Medical Society was repudiated by resolution, which passed unanimously.

CLYDE, NEW YORK:

(*From our Special Correspondent.*)

THE WAYNE COUNTY (N. Y.), MEDICAL SOCIETY AND THE NEW YORK CODE.—At an adjourned meeting of the Wayne County Medical Society, held at Palmyra on April 11th, the following resolutions were unanimously adopted:

Resolved, That the members of the Wayne County Medical Society are, and always have been, satisfied with the Code of Ethics as they have existed many years, and under no circumstances will they ever consent to mix medicine or fraternize with arrant and blatant quacks, whether such quacks have the stamp of legality or not.

Resolved, That a committee of three be appointed by this Society to ascertain what now are our relations to the State Medical Society, and in view of our connection with it, our representation in the American Medical Association, and to report at our next meeting.

CANANDAIGUA, NEW YORK.

(*From our Special Correspondent.*)

THE ONTARIO (N. Y.) COUNTY MEDICAL SOCIETY AND THE NEW YORK CODE.—At the quarterly meeting of the Ontario County Medical Society, held April 11th, the New Code of Ethics of the New York State Medical Society was formally repudiated by a vote of 18 to 3.

SYRACUSE, NEW YORK.

(*From our Special Correspondent.*)

THE ONONDAGA COUNTY MEDICAL SOCIETY AND THE NEW YORK CODE.—At a meeting of the Onondaga County Medical Society, the "New Code" came up for discussion, and by a vote of 18 to 2 the delegates to the New York State Medical Society were directed to offer the protest of the Society against the Code.

BROOKLYN.

(*From our Special Correspondent.*)

THE COST OF THE HEALTH SERVICE of this City is indicated by the statement submitted May 15, to the Board of Estimates for Taxes by Commissioner of Health Raymond, concerning the means required for the year 1883, namely: for sanitary work and registration $50,000, for ambulance service $4,000, plumbing—law service in respect of new buildings, etc.—$5,500, and the night medical service, not to exceed $3,000.

The Commissioner makes an urgent representation of the needs of the city for a contagious disease hospital.

OBITUARY.—Died in Brooklyn, on May 21, GEORGE FLETCHER, M.D., aged sixty-six years. He was a native of England, and a graduate of St. John's College, Cambridge. He came to this country, and settled in the above-named city about thirty-two years ago. He received his degree in medicine at the Long Island College Hospital. His death was due to pneumonia of six days' duration.

VIENNA.

(*From our Special Correspondent.*)

ARLT'S SEVENTIETH BIRTHDAY.—The festivities occasioned by Hofrath v. Arlt's seventieth birthday, lasting the entire week, have just ceased. The festivities assumed a general character, as an ovation to all ophthalmologists present, owing to Arlt's excessive modesty, which led him to decline a "concours," importunately besought by his students.

Upon Saturday, April 15, a soirée was given in Arlt's home. The congratulations of foreign guests, former assistants, and academic song-union commenced upon Monday, 12 o'clock M. A banquet in Arlt's honor was held on the evening of the same day, in the Grand Hotel. Upon the birthday itself, early in the morning, Profs. v. Stellwag, v. Jäger, and Mauthner visited Prof. Arlt, and Prof. v. Stellwag greeted him, in the name of his three more especial colleagues, with a very affectionate address. In the lecture-room of the eye-clinic the student part of the festival followed. When he appeared, Arlt was greeted with jubilee songs. He thanked his students for the reception, visibly affected. In the brief remarks which followed, Arlt said that, though the time in which he would be able to teach students was short, his will was as of old. In closing, he added, "I hope to be able to labor as your teacher still one or two years." According to the rule of the Austrian Universities, all teachers are retired at the completion of their seventy-first year; Arlt has therefore only a short time more before him to continue his labors as a teacher, in which he has attained such distinguished success.

The President of the Society for the Aid of Poor Medical Students spoke in glowing terms of Arlt's distinguished service in his long protectorate of that organization. Student Frömmel made an eloquent speech upon the part of poor medical students befriended by Arlt's administration.

Arlt replied that he had a warm heart for medical students, and especially for those without means, for the reason that he himself had had ample experience in the possession of only the most necessary things in life.

To Law-student Harpner, who addressed him in the name of the German-Austrian Reading Association of the Vienna High School, Arlt replied, "I accept your good wishes very gladly, because I myself belong to the German tree." (Prolonged applause.) "I am convinced that you, like me, have the desire to continue in fullest harmony with other nationalities. In my time in Prague, no man recognized any difference between a German and a Bohemian (Czeche). If you, gentlemen, remain firm in this disposition, friendly intercourse between you will never be disturbed."

The "Aspirants," or graduates seeking positions as assistants, then made their formal greeting.

After this, Arlt embraced and kissed all of the guests present. Frau Dr. Rosa Kerschbaumer was present, with her husband, and when Arlt came to her he stood still, blushed slightly, but, at a nod from her husband, kissed her, midst the liveliest merriment of the auditorium.

A deputation of professors from the Faculty of Medicine, led by Prof. Vogl; the councils of the Imperial Society of Physicians, and of other medical societies; a deputation from the Vienna Common Council, led by the Burgomaster's proxy, Dr. Prix, visited Prof. Arlt in his city residence, and wished their highly honored fellow-citizen long years for the honor of the city and of science.

The deputation from the Society of Physicians, consisting of Hofrath Skoda's representative, Hofrath Baumberger, Prof. Neuman, Docent Chiari, Prof. Dittel, Prof. Seidesdorf, Dr. Richler, conveyed to Prof. Arlt the greetings of the Society in Prof. Gustav Braun's fitly chosen words: "In the name of all of us, greeting to Hofrath v. Arlt, as *Investigator*, as *Teacher*, as *Physician*, as *Man*."

PERSONAL.—Duchek's Chair, Internal Medicine, is supplied during the summer semester, which has just commenced, by Dr. Kretschy, a former assistant. So far, he has given great satisfaction to his students. Prof. Leyden, Berlin, is the last proposed successor to Duchek.

PROF. O. SIMON'S SUCCESSOR.—Dr. Neisser, Privat Docent of Dermatology and Syphilis in Leipsic, has been appointed Extraordinary Professor of the same branch in Breslau. He succeeds Prof. O. Simon.

THE PUBLIC HEALTH.—For the *week ending May 20*, the following additional items have been received: There were 23 deaths from *small-pox* in New Orleans: 16 in Chicago; 3 in the hospital at St. Louis, and 3 new cases; and 7 new cases in Brooklyn.

Diphtheria caused 12 deaths in Brooklyn; 5 in Hudson Co., N. J.; 4 in Buffalo; 6 in St. Louis; 18 in Chicago; and 1 in the District of Columbia. The mortality from this disease in Chicago is in excess of that reported in any week since midwinter.

There is still a prevalence of *cerebro-spinal meningitis* in Buffalo. The deaths for the week amounted to 8. From the same cause there were 2 deaths in Hudson Co., N. J., and 3 in Chicago.

There is no appreciable change to report in the mortality from *scarlet fever* in Brooklyn. The deaths for the week were 25 against 24 the week preceding. Hudson Co., N. J., reports 6 deaths; Buffalo, 10; St. Louis, 7; Chicago, 3; and New Orleans, 2. From *typhoid fever*, there were 2 deaths each in Brooklyn, Hudson Co., N. J., the District of Columbia, and New Orleans; 7 in Chicago; 6 in St. Louis; 2 in Charleston; and 1 in Buffalo. At the present time, *measles* prevails extensively in Chicago. The deaths for the week were 17, the largest number reported in any week this year. There were 7 deaths in Brooklyn; 5 in Buffalo; and 1 each in Hudson Co., N. J., and St. Louis. *Whooping-cough* caused 8 deaths in Brooklyn; 2 in Hudson Co., N. J.; and 3 each in Buffalo, Chicago, and St. Louis; and 6 in Charleston.

Brooklyn reports 29 deaths from *consumption;* Hudson Co., N. J., 15; Buffalo, 6; District of Columbia, 17; Chicago, 28; St. Louis, 15; New Orleans, 18; and Charleston, 4. From *pneumonia*, there were 40 deaths in Brooklyn; 12 in Hudson Co., N. J.; 9 in Buffalo; 4 in the District of Columbia; 10 in Chicago; 19 in St. Louis; and 3 in New Orleans.

For the *week ending May 27*, we gather the following facts from the mortality returns of prominent cities:

Small-pox.—Among the large cities, Cincinnati, Chicago, and New Orleans are the only ones in which this disease prevails to any considerable extent. There is a slight decrease in the mortality for the week in Cincinnati, but an increase in that of Chicago and New Orleans. New York City reports 9 deaths; Philadelphia, 6; Wilmington, Del., 1; Pittsburg, 4, with 10 new

cases; Louisville, 7 deaths, and 2 new cases; Cincinnati, 51 deaths; Detroit, 1 death, and 3 new cases; Dayton, 1 new case; Nashville, 4 new cases; and Milwaukee, 1 death.

Cerebro-spinal Meningitis.—There were 5 deaths from this disease in New York City; 4 in Louisville, and 1 each in Philadelphia, Boston, Detroit, and Memphis.

Croup and Diphtheria.—Croup caused 16 deaths in New York City; 7 in Philadelphia; elsewhere no mention is made of the prevalence of this disease. From diphtheria there were 36 deaths in New York City; 20 in Philadelphia; 8 in Boston, and 20 new cases; 3 in Pittsburg; 2 in Cincinnati; 2 in Detroit, and 11 new cases; and 1 death in Dayton and in Milwaukee, with 5 new cases.

Scarlet Fever.—New York City reports 48 deaths from scarlet fever, the smallest number reported for many weeks. Boston reports 9 new cases and 3 deaths; Cincinnati, 4 deaths; Milwaukee, 7, and 17 new cases; Philadelphia, 10 deaths, and Pittsburg, Dayton, Detroit, and Nashville, each 1 death from this cause.

Typhoid Fever.—There were 5 deaths from typhoid fever in New York City; 15 in Philadelphia; 5 in Boston, and 10 new cases; 2 in Providence.

Measles and Whooping-cough.—Measles caused 40 deaths in New York City; 4 in Philadelphia; 3 in Pittsburg; 6 in Cincinnati; 2 in Detroit, and 1 in New Haven. From whooping-cough, there were 9 deaths in New York City; 7 in Boston; 3 in Nashville; 2 each in Pittsburg, Providence, and Wilmington, Del., and 1 in Jacksonville, Florida.

Consumption and Pneumonia.—There were 106 deaths from consumption in New York City; 55 in Philadelphia; 32 in Boston; 6 in Pittsburg; 5 each in Providence and New Haven; 15 in Cincinnati; 6 in Detroit; 7 in Nashville; 3 in Wilmington, Del., and 2 in Memphis. From pneumonia, there were 95 deaths in New York City; 43 in Philadelphia; 11 in Boston; 12 in Pittsburg; 8 in Milwaukee; 4 each in Providence and Detroit; 5 in New Haven; 8 in Cincinnati, and 1 each in Wilmington and Nashville.

In our last issue, in the eleventh line from the bottom of page 590, first column, the word "consumption" should read "pneumonia."

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending May 20, 1882, indicate that influenza, typho-malarial fever, and puerperal fever, have increased, and that remittent fever, whooping-cough, intermittent fever, neuralgia, scarlet fever, inflammation of brain, and membranous croup have decreased in area of prevalence.

Small-pox was reported present during the week ending May 20, and since, at eight places in all, as follows: at Detroit, Flint (two cases), Saginaw City, and Wayne; at White Cloud (three cases), and Grand Rapids (two cases), May 22; at Manistee (three cases), May 23; at Battle Creek (five cases, one death), May 25, 1882.

HEALTH OF THE POPE.—According to the *British Medical Journal* (May 13, 1882), the rumors which have lately been circulated as to the illness of Leo XIII. have no real foundation. Similar statements used to be made about this time in former years in reference to the health of Pius IX., and grave assertions were often published that the Vatican physicians strongly advised change of air as the only means of prolonging the life of that aged Pope. Leo XIII. is a thin, ascetic, and delicate man, liable to slight temporary ailments, and with too sensitive a nervous system for all the brain work he has to do. He is, in consequence, often tired and depressed, and unable to receive the many visitors who throng to see him; and it is well known that he dislikes receiving all and sundry, being, in this respect, just the opposite of his predecessor, who had the greatest pleasure in seeing his audience-rooms crowded with visitors. He is not, however, suffering from any organic disease; is free, just at present, from even temporary indisposition; and is probably quite as fit to bear his confinement to the Vatican and its grounds now as he was at the date of his election.

DR. JOHN P. GRAY, Superintendent of the State Lunatic Asylum at Utica, who was shot by a man named Remshaw on the evening of March 16, is steadily improving. The swelling along the track of the ball has not yet wholly subsided, and the motor paralysis on the right side of the upper lip still continues to a considerable degree; but complete recovery is confidently anticipated. For the past few weeks the doctor has been up and about his apartments a good part of each day, has slept reasonably well, and has been gaining in strength.

The commission appointed in the case of Remshaw, the assailant, has reported that he is at the present time insane, and he has been sent to the State Asylum for Insane Criminals.

THE S. D. GROSS PROFESSORSHIP OF PATHOLOGICAL ANATOMY.—A special meeting of the Alumni Association of Jefferson Medical College was held in the Hall of the College of Physicians of Philadelphia, on Tuesday evening last, to consider the endowment of a professorship to bear the name of "The S. D. Gross Professorship of Pathological Anatomy." Dr. Addinell Hewson was called to the chair, and Dr. R. J. Dunglison presented the report of a committee which had been appointed to consider the subject. The committee recommended the adoption of the following resolutions:

Resolved, That in appreciation of the great services of Prof. Samuel D. Gross to medical teaching in this country, a memorial professorship of pathological anatomy be founded by this Association, to be known by his name.

Resolved, That a permanent committee of five be appointed, with power to increase itself to a number not exceeding nine.

Resolved, That an auxiliary committee be appointed by the permanent committee, subject to the approval of the Executive Committee, from the non-resident alumni.

Resolved, That when, in the opinion of the committee appointed by the Executive Committee of the Alumni Association, the sum be sufficient, a professorship be endowed on such terms as will best attain the objects proposed by these resolutions, by a sub-committee of equal numbers of the Executive Committee and the Trustees of Jefferson Medical College.

The resolutions were adopted.

The Committee also reported that the sum of $2000 was promised by an alumnus at a late meeting of the Executive Committee, as soon as the fund should reach $8000.

The committees referred to in the resolutions will be appointed by the chairman hereafter.

GRADUATES IN MEDICINE.—At the seventy-fifth annual commencement of the College of Physicians and Surgeons, New York, held May 16, the degree of M.D. was conferred on one hundred and fifteen graduates.

WE hear that MR. SPENCER WELLS has been elected an honorary member of the Royal Society of Sciences and Arts of Gothenberg, a society which was established one hundred and four years ago.

THE eleventh session of the French Association for the Advancement of Science will be held in Rochelle from August 24 to 31.

THE second Italian edition of Bumstead and Taylor on Veneral Diseases, translated by Dr. C. Tamburini, is announced in the Italian journals.

TO PREVENT NAUSEA FROM MORPHIA.—DR. STUART recommends, in the *Maryland Medical Journal*, May 1, 1882, the combination of morphia with gentian to prevent the nausea often produced by morphia alone.

STATE MEDICAL ASSOCIATION OF GEORGIA AND THE NEW YORK CODE.—At the Thirty-third Annual Session of the Medical Association of Georgia, held in Atlanta, April 19, 20, and 21, 1882, the following resolutions were adopted:

Resolved, That the Medical Association of Georgia, in convention assembled, reaffirms its devotion to the time-honored Code of Ethics of the American Medical Association, which has heretofore been its accepted chart, and shall henceforward be its trusted guide.

Resolved, That this body deprecates any and all attempts on the part of medical organizations to break down this honorable barrier between the regular medical profession and the vast and varied domain of quackery, and do earnestly protest against departures from the true spirit of the supreme law of the organized profession of the Union.

Resolved, That a duly attested copy of these resolutions be presented to the American Medical Association, in open session, at its approaching meeting.

THE TENNESSEE STATE MEDICAL SOCIETY AND THE NEW YORK CODE.—At the late meeting of the Tennessee State Medical Society, held at Memphis, May 9, the following resolutions were adopted:

Resolved, That this, the representative medical organization of the State of Tennessee, views with extreme regret and poignant feelings of sorrow the unfortunate and untimely action of our sister society of the great State of New York, in repudiating and annulling certain important regulations of the Code of Ethics having relation to our Association with, and recognition of, those who "claim a special designation and trade upon that claim."

Resolved, That the delegates from this Society to the American Medical Association be instructed to enter the solemn protest of this Society against the action of the Medical Society of the State of New York, in adopting a code of ethics in direct opposition to that accepted and adopted by the representative medical organization of America and subordinate societies.

THE WEST TENNESSEE MEDICAL SOCIETY AND THE NEW YORK CODE.—At a meeting of this Society, held May 3, the following resolution was unanimously adopted:

Resolved, That the late action of the New York State Medical Society, wherein the attempt is made to break down the barriers between the principles and practice of the medical profession, in its professional relations to irregulars, or "one-idead" systems of charlatanism, is, by the West Tennessee Medical Society, deplored, disapproved, and condemned unconditionally.

WHAT IS SAID OF THE NEW YORK CODE OF ETHICS.

That the Society comprising the representative men of the profession in the chief city and State of the country should have seen fit to abjure the dignified position which has governed the medical profession since the earliest days, can but be considered with profound regret. Willingness to recognize as equals those who depart from the broad principles of medicine as a study of truth by rational experiment for the sole purpose of elucidating science and conferring benefit upon humanity, and to endeavor to catch the public humor and purse by pandering to prejudice and ignorant whims, exhibits not *liberality*, but most unworthy cringing to what is deemed popularity; it is simply an assertion that the honest fearless generations, now unfortunately seeming to lose their healthful influence, have been wrong. Principles of truth are the same now as ever. Time has more and more demonstrated the dishonest charlatanry of those who practice under any cognomen that *apparently* sets them apart as practitioners by special and select so-called systems.—*St. Louis Courier of Medicine.*

It is not strange that this clause has condemned the new code in the eyes of the profession, from the Penobscot to the Rio Grande, and has called forth the unanimous denunciation of the journalistic exponents of regular medicine, the *Medical Record*, of New York, alone excepted. The *Medical Record* prides itself on its standing alone in the matter, and seeks to persuade itself that it is the only champion of "liberality" in the regular ranks. . . . . There must be a line drawn somewhere between medicine proper and quackery, but the new instrument has abolished all lines and allows a miscegenation which can benefit neither quackery nor the public, and is dishonoring to a noble profession.—*The Therapeutic Gazette.*

The New York Code is having a hard time of it, and its main champion, the *Record*, is kept quite busy explaining its beauty and extolling its virtues. No use, doctor; the average American doctor knows his homœopathic neighbor too well. He knows that a large majority of them are imposters of the worst type, who simply use the term as a cloak for the practice of all manner of quackery and imposition.—*Kansas Medical Index.*

THE EXCLUSION OF THE NEW YORK DELEGATES AT ST. PAUL.—*The New York World* (May 25, 1882) has been interviewing a number of prominent physicians in New York City, and from the opinions gathered, it concludes that the New York delegates will be excluded from the meeting of the American Medical Association.

Dr. S. O. Vanderpoel, of No. 36 West Thirty-ninth street, said to *The World* reporter: "Yes, I have heard it rumored that our delegates will be refused admission to the convention, on the ground that we have seen fit to disregard one of the provisions of the Code of Ethics adopted some thirty-five years ago, and I am inclined to believe it highly probable that such action will be taken when our delegates present their credentials. But suppose we are excluded—what does it amount to? It is certainly no crying matter. Our Society is much older and a more representative body than theirs. We are in the line of progress, and they are far behind the age. That clause of the Code which prohibits members from holding consultations with homœopaths and eclectics ought to be abrogated. It is bad in its tendency, and certainly does us no good whatever. The rule prevailing in this State leaves it entirely to the option of a physician whether or no he will hold consultations with those of another school, and he is at liberty to follow his own judgment regarding the matter. That is as it it should be."

Dr. John C. Peters, of No. 83 Madison avenue, said; "The fight has really just begun, and there is every reason to suppose that in the end we will be victorious, for the simple reason that our policy is the radical one and consequently in the line of progress. Even if the delegates from the New York Society be refused admission to the Convention, it is highly probable that they will have seats there, for most of the physicians are also members of other medical societies and colleges, which also have the privilege of sending delegates, and if they do succeed in gaining admission in that way I can promise you that some of the discussions will be

highly entertaining. Consultations with physicians from the other schools are eminently proper and often productive of great good to the patient and the profession."

THE POWER OF PUBLIC OPINION.

"We repeat that the Medical Society of the State of New York has done nothing of which it may be ashamed. It can take nothing back, so far as freedom of consultation is concerned. The stand taken is an eminently proper one, and we hope it will be persistently maintained, even at the risk of non-representation in the American Medical Association. It will, in any event, be only a question of time for the Association itself to follow the example of the Society of this State."—The Medical Record, *April 8*, 1882.

"There is hardly a doubt that the action taken by this State will be imitated by others throughout the Union."—The Medical Record, *February 18*, 1882.

"The effect of these consultations will undoubtedly lead to a better acquaintance on both sides with the therapeutical methods of each."—The Medical Record, *February 18*, 1882.

"The ground assumed is viewed by many with great surprise. So far as we have been able to learn, the surprise has, however, been an agreeable one; is very generally viewed as a step in the right direction, and is, in so far, a great improvement over the American Code."—The Medical Record, *February 18*, 1882.

"The relations of the State Society with the American Medical Association must be considered in this connection. The latter association may decline to receive delegates from the State Society. Whether it will or no remains to be seen. This point was seemingly fully considered by the State Society, at least this much can be assumed in view of the radical step which it has deliberately taken."—The Medical Record, *February 18*, 1882.

"It merely states that any medical man who chooses to act according to his best judgment in consultation with any honest practitioner whatsoever can do so without being subjected to discipline for such opinion's sake."—The Medical Record, *April 8*, 1882.

"There is no more danger of consulting with homœopaths or irregulars generally than heretofore."—The Medical Record, *May 27*, 1882.

"A careful study of the New York Code will lead to the conclusion that its provisions concerning consultations do not really present any inconsistencies with similar provisions in the American Code."—The Medical Record, *May 27*, 1882.

"We speak advisedly when we say that the Medical Society of the State of New York in its recent action had no direct intention of placing itself in armed antagonism to any code calculated to elevate and advance the regular profession, but believed that it was taking a step forward by granting liberty of opinion to its members in terms not to be misunderstood. If the American Medical Association denies this right to any body of honorable, thinking, competent men, it is simply wrong, and the members of the State Society can afford to be on the other side."—The Medical Record, *May 27*, 1882.

"No member of the Medical Society of the State of New York can consistently meet a professed homœopathist or an avowed eclectic. As a disciple of a liberal science, he cannot countenance dogmatism in any shape."—The Medical Record, *May 27*, 1882.

NOTES AND QUERIES.

PUERPERAL MALARIAL FEVER.

DR. O. F. MANSON, Professor of Physiology in the Medical College of Virginia, calls our attention to the erroneous statement made by Dr. B. E. Mossman, of Greenville, in his paper on "Puerperal Malarial Fever," read at the late meeting of the Pennsylvania State Medical Society, that "there is no literature on it, save a paper by Barker."

Dr. Manson published a paper on the subject in January, 1855, in the *Virginia Medical and Surgical Journal*, and it was republished in the *Virginia Medical Monthly*, for October, 1881. Dr. Fordyce Barker considers this paper "a very excellent and truthful description of the disease."

HYPODERMIC USE OF MORPHIA.

CONCORDIA, KANSAS, May 13, 1882.

To the Editor of THE MEDICAL NEWS.

Dear Sir: Please answer under your Notes and Queries the following questions:

Do you consider the hypodermic use of morphia more injurious than when taken by the stomach?

What disease have you observed the hypodermic use of morphia causing?

Do you know any substitute for the habit as thus used? By answering the above questions, you will oblige a

SUBSCRIBER.

[1. The hypodermatic injection of morphia is probably less hurtful to the bodily functions, whilst it is greatly more dangerous, than the stomachal administration.

2. Depression of the functions—especially of the vegetative organs, and the sexual—results from the habitual use of morphia.

3. There is no "substitute;" if such existed, the effects must be equal to those of morphia, and, therefore, not really advantageous. The morphia habit is successfully treated by the withdrawal, immediate or gradual, of the narcotic, and by the administration of the bromides and chloral to procure sleep, of such nervine tonics as coca, quinia, strychnia, etc.

In Bartholow's Manual of Hypodermatic Medication, this subject is treated fully.—ED.]

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MAY 23 TO MAY 29, 1882.

MCKEE, J. C., *Major and Surgeon.*—The extension of leave of absence on Surgeon's certificate of disability, granted him in S. O. 262, A. G. O., November 10, 1881, still further extended six months on Surgeon's certificate of disability.—*S. O. 122, A. G. O., May 26, 1882.*

WATERS, WM. E., *Major and Surgeon.*—Granted leave of absence for four months.—*S. O. 121, A. G. O., May 25, 1882.*

BROWN, JUSTUS M., *Major and Surgeon.*—To report to the Commanding General Department of the South for assignment to duty.—*S. O. 121, A. G. O., May 25, 1882.*

BROOKE, JOHN., *Captain and Assistant Surgeon.*—To be relieved from duty in Department of the South, when Major Brown shall have reported for duty therein, and to proceed on July 1, 1882, to Presidio of San Francisco, Cal., and report in person to the Commanding General, Military Division of the Pacific, for assignment to duty in Department of California.—*S. O. 121, c. s., A. G. O.*

BROWN, PAUL R., *Captain and Assistant Surgeon.*—Granted leave of absence for six months on Surgeon's certificate of disability.—*S. O. 121, c. s., A. G. O.*

MOSELEY, E. B., *Captain and Assistant Surgeon.*—Granted leave of absence for four months.—*S. O. 120, A. G. O., May 24, 1882.*

SEMIG, B. G., *Captain and Assistant Surgeon.*—Granted leave of absence for one year on Surgeon's certificate of disability.—*S. O. 121, c. s., A. G. O.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia*

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AMERICAN MEDICAL ASSOCIATION.

THIRTY-THIRD ANNUAL MEETING, ST. PAUL, 1882.

THE ADDRESS IN MEDICINE.

Delivered June 7, 1882.

BY J. A. OCTERLONY, A.M., M.D.,
OF LOUISVILLE, KY.

LORD BACON has said that "medicine is a science which hath been more professed than labored, and yet more labored than advanced, the labor having been rather in a circle than in progression. For I find much iteration, but small addition." However well deserved this severe criticism may have been in 1605, when the great philosopher published his two books on the "Proficience and Advancement of Learning," it is not applicable to medicine in our days. Could Bacon, in the full possession of his imperial intellect, behold the progress our science has made since his time, he would quickly perceive that the labor has not been in a circle, but in progression; and he would, perhaps, have to complain that there was not enough of iteration, while he found that the addition had been immense. Medical science has advanced with steadily increasing velocity. New facts are discovered every day, and not only enrich our knowledge, but give new impetus and direction to thought. New names are being devised to convey new ideas. Both would appear as strange to the practitioner of forty years ago as the technical terms he encountered at the commencement of his medical studies. During the last twenty-five years more progress has been made than during the preceding twenty-five hundred years. We are prone to take things as we find them; to accept things as they are, and not to trouble ourselves how they came to be, but assume that they have always been. Yet a retrospect, extending over a comparatively short period, will show that medicine has undergone a great revolution. Medical science of a century ago is no more like modern medicine than the old alchemy was like the great science of chemistry of our time. Even in the middle of the eighteenth century, the knowledge relating to those common diseases, scarlatina and measles, was so meagre that the two were confounded with one another. Writers of the highest repute supported the identity of the two diseases. It was not until 1768 that Sauvages first discriminated between them, so as to fix the acceptation of their names. Up to the year 1827 the various morbid conditions now embraced under the generic title of Bright's disease were not understood. In that year, Dr. Richard Bright published his researches, which created an era in medicine, and have rendered his name immortal. They furnish the foundation upon which the investigators of a later generation have labored with such ardor and success that the literature they have built up, and the results achieved, form a monument fitly commemorating the genius of the pioneer in renal pathology.

Those who within the last twenty-five years have received instruction and acquired proficiency in the diagnosis of cardiac diseases will perhaps hear with surprise that before the year 1840 the very name of endocarditis was unknown. Bouillaud first introduced this term, having recognized the disease during life; and he emphasized its frequent occurrence in connection with inflammatory rheumatism. Kreisig, about the same time, ascertained the anatomical foundation of valvular lesions in inflammation of the endocardium, and interpreted the true meaning of their microscopical appearances post-mortem.

Few diseases are more striking and peculiar than exophthalmic goitre; yet it was but in 1835 that Dr. Graves, of Dublin, first described this disease which is now inseparably associated with his name.

That peculiar morbid condition connected with degeneration of the suprarenal capsules, and accompanied with bronzing of the skin, was first described by Dr. Thomas Addison in 1855. Its nosological existence dates back less than thirty years.

But it is not my purpose to present even a hurried sketch of the advancement of medical science in modern times. A mere recital of single facts would fill a volume.

The history of "medicine in the nineteenth century" is not yet written, but when it shall have been, it will form one of the grandest and noblest chapters in the history of science. Neither would I pass in review the names of those brilliant men who have achieved so much for science and mankind.

> "Quæ vobis, quæ digna, viri, pro laudibus istis
> Praemia posse rear solvi? Pulcherrima primum
> Dii moresque dabunt vestri."

Great has been the work and vast mulitudes of facts have been accumulated, but the process of crystallization into general laws has been slow.

The want of a great central law to give certainty and precision to medical science is keenly felt. What the law of gravitation has done for astronomy, and the law of chemical affinities for chemistry, may some day be done for medicine. In the meantime medicine is in a transition state. Amid the roar and crash of conflicting opinions, and the confusion of contradictory observations, it requires a clear head and a heart consecrated to truth to keep men firm in the faith of the power and benificence of the healing art. We may not have "sloth in the mart but we do have schism within the temple."[1] The general scepticism of the age has invaded medicine in its wide sweep, and there are those within our ranks who, with Mephistopheles in Faust, would say:

> "Der Geist der Medicin ist leicht zu fassen,
> Man durchstudirt die grosse dann die kleine Welt,
> Um es am Ende gehen zu lassen
> Wie's Gott gefällt,"

It were strange, indeed, if the human intellect which had trained the elements to do its bidding, transformed the surface of the earth to suit its pleasure, and with all but God-like power moulds circumstances in obedience to its designs, should have been baffled by the intricacies of its own bodily frame.

Is it likely that the human mind that leads the very lightning captive should have failed in its efforts to modify and cure disease? Those of the medical profession who have doubted the power and efficacy of medical science have generally been men whose minds were so absorbed by the fascinations of the collateral sciences, of anatomy, pathology, chemistry, etc., that their attention had become diverted from the arduous tasks of the practical physician; hence they fail to experience his triumphs.

[1] Richelieu, by Edward Bulwer Lytton.

As I cast my eyes over this vast assembly and behold the intelligent countenances of hundreds of men whose lives are devoted to the great work of preventing and curing disease, I feel that among these "healers of the sick" there can be but few who fail to own the great capabilities of their art. The sciolists in medicine are many, and their faith, like their knowledge, is small. With profound knowledge and mature experience come also a just appreciation, not only of what medical science has done in the past, and may hereafter accomplish, but also of the glorious victories she is achieving at the present time.

What we are enabled to do now is in large measure due to the work of those who preceded us. A noble army of workers they were, those generations of physicians who have toiled and died and passed on to their reward, all through the ages. Many a hero and martyr there was among them. Affectionate memory loves to linger over the names of Vessalius, and Servetus, and Knox, and Harvey. In his heart every true physician pays a tribute of reverence also to the unknown host whose names have not been inscribed upon the scroll of fame.

Among the great leaders in medical thought and investigation have towered men of such imperial genius that their efforts must have been crowned with success, no matter what science had been their field of labor.

No genuine work is ever lost, but in the course of time, and according to immutable decrees, bears fruit in the advancement and elevation of the race. Hence it is that the achievements of our great ancestors in the profession are reverently commemorated.

Their work still lives. Their best knowledge has been handed down to us, and continues to be cherished and utilized for the benefit of mankind.

"Were a star quenched on high,
For ages would its light,
Still travelling downward from the sky,
Shine on our mortal sight.

"So when a good man dies,
For years beyond our ken,
The light he leaves behind him lies
Upon the paths of men."

In viewing the present state of medicine, and endeavoring to estimate the character and race of progress, two lines of inquiry open before us. Following one, we would proceed to glean from the current literature of the year just past, whatever new facts have come to light, and the new theories which have been cast up by the tide of progress as foam tossed by the waves of the ocean. The foam may have but little value, but it tells of the intense commotion of the waters. So the multitude of theories advanced, though most of them be ephemeral as the foam, yet indicate the seething intellectual activity which pervades the medical profession of our day. Following the other, we would study the tendencies of professional labor and thought during a longer period, with the expectation of thus more clearly discerning the direction and rate of its development. The latter has been more in the line of my own studies, and, being more congenial to my taste, is the one I have pursued in this address.

Let us glance for a moment at the subject of inflammation. There is none of equal importance in regard to which professional investigation has been more active, and professional opinions have undergone so great a change. As Andral said: "Created in the infancy of science, this expression altogether metaphysical, was destined to represent a morbid state in which the parts appeared to burn, to be inflamed, etc. Received into general language without any precise idea having ever been attached to it; in its triple relation of symptoms which announce it, of the lesions which characterize it, and of its intimate nature—the expression inflammation has become so vague, its interpretation so very arbitrary, that it has lost its value."

Yet the important morbid change in the animal economy designated by this name is so intimately interwoven with the theory and practice of medicine that it meets us at the very commencement of our pathological inquiries. In all ages it has been made the pivot upon which the medical philosophy of the times has revolved. During hundred of years inflammation was defined by four symptomatic phenomena, "redness and swelling with heat and pain." The insufficiency of this crude definition became apparent when it was ascertained that simple congestion will present all these; pain may be absent and the others may be impossible of demonstration. An effort to overcome this difficulty was made by adding a fifth essential element, namely, disturbance of function in the inflamed part. But even this proved inadequate, for experience soon taught that every morbid process, whether inflammatory or not, involves a disturbance of the normal functions.

These symptomatic definitions were at last abandoned when a knowledge was obtained of the circulatory changes which occur at the commencement of the inflammatory process in vascular parts. An anatomical definition was then set up. Active congestion, it was now held, is the initial symptom of inflammation, which was defined and characterized by this fluxion and by parallel changes in the capillary circulation. This was another forward step, but still inadequate, like former ones. That fluxion was an initial step in the inflammatory process was established, but it was also clearly seen that it is not characteristic of and does not of itself constitute inflammation.

But the exudation into an inflamed part is not identical with the serum of the blood, from which it differs both chemically and microscopically: and Rokitansky's formula ignores the inflammatory process in non-vascular parts, such as cartilage, cornea and crystalline lens.

A long time had elapsed before the tendency to exaggerate the importance of the vascular disturbance, was sufficiently overcome to allow due attention to the modifications of the component parts of the tissues inflamed. But in the course of time it became recognized that the vascular disturbance alone does not constitute inflammation, which may exist without it; and the tissue disturbance alone is constant and sufficient to furnish the essential element of the inflammatory process.

In the light of modern pathological research inflammation thus has gradually come to be viewed as a disorder of nutrition excited in living tissues by some abnormal impression (irritant), and consisting in a temporary exaggeration[1] of the nutritive activity of the part irritated.

Remarkable indeed, and most significant too, are these successive steps in the development of scientific knowledge regarding inflammation, which I have just sketched. A recent writer very forcibly expresses the modern view on this subject. At present more correct notions obtain, the inflammatory process has been followed up and tracked to its furthest retreats by a legion of industrious workers, and has been found to be almost a physiological action. It is often really a benevolent—the natural—process of repair. We know now that there is no sharp line of demarcation to be drawn between that process of increased nutrition which develops horny masses of epidermis on the hands of the workman, and the process which disturbs the valves of the heart; nor yet even betwixt it and the inflammatory action in the lungs which so frequently closes the career of pyæmia. After all, they are processes of

[1] Jaccoud, Pathol. Interne.

increased nutrition which differ in degree rather than in kind.[1]

The pathology of the nervous system used to be regarded as a "terra incognita." Not only was nothing known, but it was held that the inherent difficulties of the subject were so great that nothing ever could be known about it. Compare, for instance, the text-books and monographs of thirty years ago upon the diseases of the nervous system, with those now accessible to every physician. The brilliant workers in this field have not labored in vain. The additions which have been made to our knowledge of the morbid anatomy, diagnosis, and treatment of these diseases have been great. Hyperæmia of the brain is now not only much better understood, but it is capable of being recognized even in its minor degrees, when formerly it must have escaped detection. It is also treated much more successfully than was ever done by the old, rude method of venesection.

The true nature of locomotor ataxia, progressive muscular atrophy, and the so-called essential paralysis of infants has been made out. Athetosis, allochiria (*New York Medical Record*, October 15, 1881), and pseudo-hypertrophic spinal paralysis have been added to the list of nervous diseases. How much light has been shed by modern medicine upon that distressing malady hysteria, its true nature and appropriate treatment!

The knowledge fast accumulating in regard to the localization of cerebral lesions makes it exceedingly probable that at a not very distant day, will the skilled physician be able to determine the nature and seat of brain lessions with the same accuracy that he now recognizes the character and seat of valvular lesions of the heart.

When we consider what was known of diseases of the lungs when Laennec, in the first quarter of this century, published his great work on thoracic diseases, and contrast with it the present state of pulmonary pathology and therapeutics, the progress appears immense. Pulmonary consumption is no longer the fatal unit it was regarded to be. That there are at least three distinct anatomical varieties (tubercular phthisis, fibrous phthisis, and caseous pneumonia) is now so well known that it is hardly worth mentioning. But it may not be amiss to point out how widely the course and duration of the clinical varieties of phthisis differ. The masterly work of Pollock on the elements of prognosis in phthisis really marks an era in the literature of the subject. The duration of this disease has been doubled under the present wise plans of treatment. If science has added new terrors by discovering an infectious form of phthisis, she has also revealed therapeutic resources which constitute a true improvement. Among these may be mentioned the hygienic treatment of the offspring of phthisical parents, which should begin with the very hour of their birth; climatic and pneumatic therapeutics; the local treatment of pulmonary cavities, etc. Waldenburg's pneumatic apparatus must be considered a great improvement in the treatment also of other pulmonary diseases and in some forms of heart disease.

Hepatic pathology has been enriched with a disease which until recently had no clinical existence. The "cirrhose hypertrophique" of Charcot—"hypertrophic cirrhosis, with jaundice," of English writers.

Recent investigations, connecting urea formations with the liver, tend to throw additional light upon this organ in its pathological, as well as physiological, aspect.

The brilliant operations of Billroth and his followers in resection of the pylorus for cancer have elicited the wonder and admiration of the world. But the simple procedure of washing out the stomach with plain water or medicated solutions constitutes an improvement of a higher order in therapeutics, and of far wider application.

Renal pathology is essentially a development of modern times. Bright himself, who first traced the connection between dropsy and disease of the kidneys, knew little or nothing of the structural changes and morbid processes involved in what now goes by the generic term of Bright's disease. The knowledge that it includes at least three anatomical varieties, each giving rise to sufficiently distinctive clinical phenomena to render its diagnosis practicable, has been evolved by the pathologists and clinicians who have succeeded him. The progress in renal pathology and its splendid literature, constitute one of the most brilliant achievements of modern medicine. The original investigations, published during the last year, by Professor DaCosta, trace the morbid process of Bright's disease to the deep recesses of the nervous system, and establish beyond much doubt that the renal lesions are induced by structural changes in the great abdominal ganglia of the sympathetic.

The lancet has been called "a little instrument of mighty mischief." Its power for good or ill is now extinct or in abeyance. A somewhat larger instrument, yet small enough, plays even a more conspicuous *rôle* in our times than did the lancet some generations ago. The story of Aladdin's lamp and its magic virtues fades into insignificance, and sounds dull and flat in comparison with the marvellous realities revealed to us by the microscope. It has brought the hidden things of nature to light, and wrought a transformation in science. The practical physician finds it as indispensable in his daily work of diagnosticating disease, and forming a prognosis, as the chemist and physiologist in their laboratories.

Many diseases about which very indefinite notions formerly prevailed have, in recent times, been found to depend upon parasites, whose presence in the affected person could be demonstrated only by means of the microscope.

Leprosy,[1] that terrible scourge handed down from the most remote antiquity to our own times, has been shown by Eklund, of Sweden, and Hansen, of Norway, to depend upon a vegetable parasite, the *Micrococcus leprœ* of the former, the *Bacillus leprœ* of the latter. Neisser, of Breslau, Ferd. Kohn, and Koch, have confirmed the correctness of these observations. The nature and etiology of leprosy may, therefore, be considered to be definitely established.

So much has been written upon typhoid fever, it has been observed so closely and for so long a time, it would appear that the knowledge in regard to it might ere this have become complete; yet it is but recently that an approach has been made toward determining with certainty the character of its infectious principle. The disease has been associated in our minds with conditions of gradual but incomplete degeneration of organic and especially of animal substances. An investigation of these was, therefore, most likely to furnish the desired facts. It is now conceded by trustworthy observers that the noxious principle is a parasite known as the *Iliotyfofyton Kleinii*, whose development is favored by the very conditions under which typhoid fever is known to arise. Scarlatina has been made the object of searching investigations which have been rewarded with important results. The blood in this disease has been shown to contain prodigious numbers of a peculiar microscopic parasite, the *Plax scindens*, which is also

[1] J. M, Fothergill, Pract. Handb. Treatment.

[1] Octerlony—Physician and Surgeon, Dec. 1879, and Louisville Med. Herald, Dec. 1879.

present in the urine, and is admitted to be the infectious principle of this disease. Dr. J. H. Kidder,[1] of the United States Navy, has with great care examined the blood of scarlatina, and has recently published the results of his investigations. The conclusions reached by him appear to corroborate the views of Eklund and others, as to the presence of peculiar microscopic cells in this disease. And it is probable the bodies seen by him will be found identical with those discovered by Eklund.

Prof. H. C. Wood and his collaborator, Dr. Formad, have recently conducted extensive investigations which tend to prove that diphtheria is due to the presence of microscopic fungi. The idea is not new, and has, as is well known, been frequently advocated. Eklund, several years ago, attributed this disease to the action of a fungus which he named the *Boavliophyton glaucum*.

Malarial diseases, so common with us and so destructive to life in many parts of the world, have long been attributed to the action of a peculiar miasm so subtle as to have for a long time eluded the observations of even the most industrious searchers. It seems, however, that its nature has at last been ascertained. In 1879 Professor Tommasi Crudeli, of Rome, and Prof. Klebs, discovered a parasite in the soil of malarious districts. The parasite was never found where malaria is unknown. The parasites were invariably found in the blood of persons suffering from malarial disease, but never in those free from such disease. Blood drawn from the veins of persons affected with malaria, and injected into the subcutaneous tissues of dogs, reproduces the disease in these animals. Eklund, of Sweden, several years ago declared intermittent, remittent, and pernicious fever to be caused by a vegetable parasite, the *Limnophysalis hyalina*. It is probable it may be found identical with the *Bacillus malariæ*. of Tommasi and Klebs.

Helminthology, as a branch of medicine, is entirely of modern birth.

Trichina spiralis, the most dangerous of all animal parasites, was seen by Tiedman in 1832, and was first described in 1835 by Mr. Owen, from a specimen given him by Mr. Paget. Virchow himself had not seen a case until 1859. Although this parasite gives rise to an alarming disease, its symptomatology and danger to life were not known until 1860.

The first accurate description of hydatids (the *Echinococcus hominis*) was first published by Bremser in 1821. It then became known that they are immature forms of *Tænia echinococcus*. It was only in 1851, that Kuchenmeister by a series of brilliant experiments proved that the *Cysticercus cellulosa* is an embryonic form of *Tænia solium*, and that a similar relation exists between other cystic and cestoid entozoa.

These and innumerable other discoveries of practical application to our art, could not have taken place without the aid of the microscope. Were it possible now to wipe out the work done with this instrument, histology and pathology would at the same time pass out of existence and kindred sciences would be thrown back into their infancy.

So it is that improved appliances and more perfect methods have led to a steady improvement in every department of our art. The growth of collateral sciences has shed a light and conferred a degree of exactness upon medical thought and observation which to our forefathers of two hundred years ago would have been almost miraculous. But it is not only in our knowledge of the nature of disease and in the improved methods of diagnosis that our progress has been made. The materia medica of the present day has received many recent additions of great efficacy which, while of great importance, yet are so familiar as to hardly require even a mention.

Not a revolution of the moon takes place without marking an onward step in the majestic march of science. May we not then have a reasonable hope that some day in the near future another Newton shall arise who will do for medicine what the first did for astronomy, and decipher that yet hidden law inscribed by the Almighty upon the page of nature which shall give unity to our methods and precision to our results?

[1] Med. Record, April 15, 1882.

ORIGINAL ARTICLES.

CASE OF SUBCUTANEOUS SUPRA-CONDYLOID OSTEOTOMY FOR CURE OF GENU-VALGUM.

By AP MORGAN VANCE, M.D.

LATE INTERNE OF HOSPITAL FOR RUPTURED AND CRIPPLED, NEW YORK; ORTHOPEDIC SURGEON OF KENTUCKY INFIRMARY FOR WOMEN AND CHILDREN, AND OF LOUISVILLE CITY HOSPITAL.

On January 20, 1882, F. B., a mulatto child, aged three and a half years, was brought to me to be treated for knock-knee. I found her general health good, but the deformity about as bad as I had ever seen. The distortion was increased by inward and anterior curvatures of each tibia, slightly worse in the left. The total divergence measured sixteen and a half inches between the heels, when the patient stood with the knees together. (See Fig. 1.)

The mother stated that, during her first year, the child had lived in an apartment on the ground floor, under which was an old cistern. She began walking early, the deformity becoming noticeable shortly afterward, and increasing gradually until I examined her. She walked laboriously and with an unsteady gyratory gait.

The bones were unyielding and hard, and I immediately told the mother that the child would not be benefited by braces, but I thought the limbs might be straightened by an operation—both thigh-bones to be broken, set right, and dressed as fractures. The woman was horrified and left the consulting room, saying she would send her husband to see me. He came next day, angry at the seeming cruelty proposed, but, during a talk of a few minutes, he was convinced that the operation was advisable, and consented that it should be undertaken.

On February 7, without preparatory treatment, the patient was chloroformed, and, with the assistance of Dr. R. L. Thomson, the family physician, and in the presence of several other professional friends, I performed the operation.

The instruments used were an osteotome (a chisel three-eighths of an inch wide, made to order by Tafel Bros., from patterns which I furnished), a bistoury of the same breadth, a well-padded marble block, and a mallet.

The inner condyle resting on the firm block, the bistoury was sunk transversely to the outer side of the femur, about half an inch above the epiphyseal junction, and the osteotome inserted beside it, so as to enter the same periosteal incision. The knife being then withdrawn, the chisel was driven with the mallet, through the bone, until it reached the hard shell on the inner side. The instrument was loosened and driven in different directions, until

the bone was sufficiently weakened to be broken by force applied as follows: The assistant fixing the thigh, the operator, using one hand as a fulcrum at the point of section, took the leg at the ankle with the other, and drew it to the line of the thigh, snapping the partly severed bone. The chisel, which had been left in the bone until complete fracture was assured, was then removed, and a pad of absorbent cotton was secured over the wound. The other leg was treated in the same manner, and both were straightened, and fixed in a double spica of plaster of Paris. Very little blood was lost, and both bones were broken and the wounds sealed within two minutes after the first incision. The child suffered no shock, and was playing and happy two hours after the operation. She did not complain of pain at the point of section, the stiff dressing around the pelvis causing the only discomfort. No medicine was given at any time, and the temperature, except on the evening of the fourth day, when a rise of 0.8° occurred (due, I think, to indiscretion in feeding), remained, as it was before the operation, at 99° in the mouth. On the eighth day, the pelvic band was removed, and the patient allowed to assume a sitting posture. On the eleventh day a new dressing was applied. At this time the wounds were healed, with no sign of pus; no more blood was found than that which had issued when the cotton was applied, immediately upon the removal of the osteotome; there was sufficient union to enable the child to raise the limbs from the table, and they were flexed without

FIG. 1.

causing pain. After twenty-five days from the date of operation, this second dressing was removed, and the child allowed to do as she pleased. Within a week she was walking very fairly, and able to go up and down stairs alone. No further trouble was experienced. At the end of seven weeks, the photograph represented in Fig. 2 was taken. This does not fairly show the actual rectification of the limbs achieved, the relaxation of the internal lateral ligaments still allowing the apparent divergence under the weight of the body. The legs were parallel when relieved of this. The difference between the position in Fig. 1 and that in Fig. 2, represents quite accurately, however, the amount of obliquity really overcome, as the divergence in the former was likewise exaggerated by the weight.

FIG. 2.

This operation was performed under very unfavorable circumstances, the child lying in a ground-floor room, which was the sole apartment of the family, and used as kitchen, dining-room, wash-room, and bed-room. There were no antiseptic precautions except that of taking the instruments and sponges used from a two-and-a-half-per-cent. solution of carbolic acid, and the subsequent nursing in the case was only such as could be done by the ignorant and laboring mother, in such miserable quarters. The result, I think, proves fully the feasibility of perfectly subcutaneous osteotomy. To insure success, thorough decision and great rapidity in operation, absolute cleanliness, careful exclusion of the air, and prompt sealing of the wound with an absorbent dressing, are of course requisite. With these ordinary conditions, division of the femur may be effected, it seems to me, with as little danger to the patient as is incident to a case of simple fracture accidentally produced.

DERMOID CYST OF RIGHT OVARY; OVARIOTOMY; RECOVERY.

BY P. J. MURPHY, M.D.,
SURGEON IN CHARGE, COLUMBIA HOSPITAL FOR WOMEN, WASHINGTON, D.C.

MRS. ELIZA CARTER, a white woman, aged about 60 years, born in Ireland, the mother of 8 children (the youngest of her children is a grown man), was

admitted to the Columbia Hospital for Women on March 3, 1882. It was impossible to obtain an intelligent history from the patient, but several facts connected with the case are worthy of record. About three or four years ago she fell down stairs, striking on her right side; and to this accident she attributes all her misery. Has not noticed the swelling in her abdomen until within the past four months; has complained of falling of the womb for some years; the womb comes outside, and she is obliged to wear a bandage between her thighs all the time; has great pain in her back and hips. She has not menstruated for several years; as near as she can tell, eight years have passed since she last saw her "monthlies," which had been very free for some years before they stopped. Her appetite is very poor, and food produces nausea and sometimes vomiting; bowels are constipated, and she belches a large quantity of gas; great thirst and gnawing pains through stomach.

Upon examination it was discovered that there was procidentia uteri, with cystocele and rectocele; uterus much congested and enlarged; cervix uteri lacerated, with everted lips and follicular erosion. Abdomen enlarged to the size of a six-months' gestation, and containing a tumor independent of the uterus.

Resonance on percussion was elicited in either flank and around margins of the growth; fluctuation through all parts of the tumor was obtainable. Thinking that some of the dyspeptic symptoms depended upon the prolapsed condition of the uterus and its appendages, the organ was replaced and kept *in situ* by a ring pessary. The diet of the patient was restricted to the most bland and nourishing articles of food, and such medication used as was deemed prudent to control the nausea and vomiting.

Ovariotomy having been agreed upon, the patient, on April 6, 1882, was etherized by Drs. Pool and Mayfield. There were present Drs. Reyburn, Yarrow, Stanton, James T. Young, Sowers, and Ritchie, of the Advisory Board of Physicians and Surgeons; Dr. DeWitt, U. S. A., Barnes' Hospital, Soldiers' Home; Dr. H. L. E. Johnson, and Mr. Russell (second years' medical student).

The abdominal cavity was opened by an incision three inches in length (precautionary measures being used to prevent the entrance of blood or fluids into the peritoneal cavity), the tumor presented and its contents evacuated. Eleven pints and ten ounces of fluid were obtained, which resembled thin pea soup, together with some hair, a large bicuspid tooth and several fragments of bone. The attachments were severed by sharp-pointed scissors, and seven catgut ligatures used to control the hæmorrhage from the bleeding mesenteric vessels. The pedicle was secured by carbolized silk ligature, and the abdominal wound brought together by four silver wire sutures. The operation was performed antiseptically, and a small drainage tube placed in the lower angle of the incision.

Dr. Lamb, Pathologist of the Army Medical Museum, gives the following brief outline concerning the nature of the cyst: "The ovarian cyst wall was composed of connective tissue with a suppurating inner surface, no epithelium, no skin, no gland tissue found. The macroscopical characters are of course dermoid." The microscopical appearance of the fluid contents of the cyst I have not been able to procure.

It is not necessary for me to enter into a detailed statement of the condition of the patient since the operation. There was very little discharge from the drainage tube, and what did come away had not the slightest perceptible odor. I withdrew the tube on the morning of the third day. Nausea and vomiting were controlled, when pounded ice, champagne, ginger ale, soda water, etc., failed, by giving calomel, gr. $\frac{1}{12}$, every two hours. The treatment for the forty-eight hours following the operation, was the exclusive use of lime water and milk, given in tablespoonful doses at shorter or longer intervals, depending upon the nausea.

Much of the success attending ovariotomy in my experience has depended upon the intelligent nursing by the assistants, and I am fully convinced that nursing is the prime factor in the life-saving service of all the major operations a surgeon is called to perform.

The pulse-rate and temperature are the wheel and compass in ovariotomies, and I am fully convinced, after ten years' experience, that a good nurse on such occasions is the greatest comfort a surgeon can possess. I have always adopted Listerism, either to its fullest extent, or, for the spray, used a carbolized atmosphere.

The clinical history of this case has been taken from the record by my Assistant, Dr. H. L. E. Johnson.

HOSPITAL NOTES.

VIENNA GENERAL HOSPITAL.

(Service of PROF. SPAETH.)

VIABILITY OF PREMATURE CHILDREN.

(*Specially reported for* THE MEDICAL NEWS.)

A pair of male twins was recently brought into the lecture-room of Prof. Spaeth, and formed the text of some remarks upon this subject. One of the children presented several misformations, such as hydrocephalus, harelip, cleft palate, club feet, umbilical hernia, etc.

The other was born alive, normally formed and weighed 900 grammes. If the weight of a fully developed, new-born child is taken at 3000 grammes, 1500 grammes will be the weight of a child at the end of the seventh lunar month. A weight of 900 grammes corresponds to a fœtus in the second half of the sixth lunar month, and according to the generally received opinion the child was not viable, since the end of the seventh lunar month is the accepted time for viability.

Prof. Spaeth, however, supported by his rich experience, affirmed that children even in the sixth lunar month could be kept alive, if special care was taken in their treatment. The slight amount of bodily heat which these children produce renders it necessary, in the first place, to guard against the dissipation of that agent. For this purpose, careful wrappping in cotton is excellent.

The delicacy of the digestive organs must be noted, and only such milk selected for nutriment as contains a small amount of casein, the constituent of milk most

difficult of digestion. Experience teaches that the longer a nurse suckles, so much richer in casein does her milk become.

It is, therefore, necessary to select for a wet-nurse a young woman who has been very recently delivered. Another requisite is that the wet-nurse must have long nipples; since the child itself is too weak to suck and to swallow, the nipple must extend deep into the mouth, so that the milk runs, so to speak, directly into the stomach.

That it is possible to raise a child so poorly developed, Prof. Spaeth proves by the relation of a case in his own private practice. This child was born in the sixth month. The parents were wealthy and every detail of the costly experiment was scrupulously carried out. The child, a boy, is now five years old, in perfect health and bodily vigor. Indeed, in this respect, he surpasses his brothers and sisters, who came into the world at the end of the usual period. Moreover, that the mortality among premature children is very great is easily comprehensible when the great mortality of children, generally, during the first year of life, is taken into consideration.

MEDICAL PROGRESS.

New Method of Treatment of Yellow Fever.—Dr. Lacaille has recently (*La Independencia Med.*, Jan. 22, 1882) called attention to the favorable results which he has obtained in twelve cases of yellow fever from the use of carbolic acid administered internally and hypodermically. He was led to try this remedy inductively, believing that yellow fever is essentially a zymotic disease. In one case which he records, the dreaded and generally fatal symptom of black vomit had already appeared. He injected subcutaneously 100 minims of a 5 per cent. solution, and administered a julep composed of carbolic acid and carbolate of ammonia, supplemented by enemata of sulpho-carbolate, at intervals of two hours. This treatment is generally successful within three days, but may be continued to the seventh.—*London Med. Record*, May 15, 1882.

A New Vesicant.—Dr. José Armengue, of Barcelona, has lately brought to the notice of the profession a new vesicant, which in many respects would appear to be far superior to cantharides. The new material is derived from the *Œnas afer*, a coleopterous insect, which at certain seasons of the year appears in enormous quantities in many parts of Spain. From experiments which Prof. Armengue has instituted on his own person, and on that of several medical students, he is led to claim for the *Œnas afer* as a vesicant the following advantages over cantharides: it is cheaper; it acts without appreciable pain; it is equally powerful; and it does not, so far as his experiments have yet shown, affect the genito-urinary system. If its non-inflammatory action can be established by further experiment, it is probable that the *Œnas afer* will be a valuable addition to the materia medica.—*Brit. Med. Journ.*, May 20, 1882.

Intra-cranial Disease and Choked Disk.—Dr. Edward G. Loring contributes to the June number of the *New York Medical Journal and Obstetrical Review* an article on the nervous connection between intra-cranial disease and choked disk, the conclusions of which are: 1. That the vaso-motor theory, as advanced by Benedikt, is not sufficient to explain either the mode of transmission of the morbid irritation within the head, or the resulting neuritis optica. 2. That the irritation is conveyed, not by the isolated fibres of the sympathetic system, as stated by Benedikt, but through the agency of the trigeminus. 3. That choked disk or papillitis, in connection with brain disease, is the expression of an irritation or compression of certain intra-cranial fibres of the fifth pair which preside over the blood supply of the disk and neighboring parts, and also maintain the healthy processes of waste and repair of the tissues themselves. This being so, he adds, the same analogies and distinctions between "irritation" and "inflammation" can be made here as with sympathetic ophthalmia, so that here, as well as there, the irritation may exist as such for an indefinite time, or may so reduce the vitality and resisting power of the tissue of the disk and surrounding parts as to develop gradually, or explode suddenly, into an actual inflammation—that is, into a neuritis. The immediate and exciting cause of this neuritis may then be either an external one, such as exposure to cold or heat, over-exertion, either mental or physical, or, indeed, too much exposure to light, the effects of which, under the weakened condition of the organ, may be looked upon as a "traumatism;" or the exciting cause may be an internal one, such as some irritation from the condition of the blood and circulating fluids, either chemical or mechanical, either local or general, which, insufficient in itself to produce any bad effect upon a normal disk, may yet be just sufficient to produce a condition of inflammation in a part that is weakened and irritable.

Sugar and Sugar-forming Substances in Pleuritic Exudations.—The observation of Eichhorst (*Zeit. f. klin Med.* III. 537), of the gradual formation of sugar in the effusion, at first entirely free from sugar, removed by an aspiration from a patient with pleurisy, led him to study more closely the serous exudations of seventeen other cases. Of these cases, the fluid in ten cases, drawn off by means of an aspirator and subjected immediately to examination, was found to contain sugar, while in two both sugar and sugar-ferment were absent. It seemed that the presence of sugar excluded the sugar-forming substance, which was, however, found in all the other fluids examined. In two cases it was found that the ferment was not destroyed by boiling. The method employed for determining the presence of the sugar-forming body consisted in boiling the exudation with sulphate of soda; the cold filtrate then was found to stain violet-blue with iodine and iodide of potassium solution. When this reaction was absent, sugar was never formed, either on standing or on digesting with saliva.—*Centrlb. f. d. Med. Wissen.*, April 22, 1882.

Treatment of Diphtheria.—Dr. Denker (*Vracheb. Vedom.*, 1882, No. 3) who, during his twenty-four years' practice in the large Nicolaevsky Children's Hospital in St. Petersburg, treated above two thousand diphtheritic cases, and tried all possible external and internal remedies recommended for this grave affection, obtained the best results from the following method, which he has practised ten years. As soon as white spots appeared on the tonsils, the author administered the *aqua laxativa Viennensis* (compound infusion of senna) in doses of six ounces to an adult man, of five ounces to an adult woman, three ounces to a child eight years old, two ounces to a child three years old, and a teaspoonful to a infant twelve months old. The dose was divided into three parts; one-half was taken at once, a quarter of the dose an hour later, and still later the remaining quarter of the medicine. Abundant liquid stools followed. When the purgation stopped, the author ordered a cooling draught, containing some hydrochloric acid, and, every two hours, a gargle, consisting of equal parts of lime-water and hot milk, the same mixture being used for cleansing (by means of a pencil) the throat and nasal cavity. Dr. Denker

alleges that, when early begun, such treatment generally led to a rapid recovery of patients.—*London Med. Record*, May 15, 1882.

Curious Accident in Paracentesis Thoracis.—Dr. Couette exhibited, at a meeting of the Société des Sciences Médicales de Lyon, a drainage-tube which had fallen into the cavity of the pleura, after an operation for empyema, and which was extricated from it in a very curious manner, viz., by, so to say, invaginating itself within the canal of another tube of a larger calibre which had been introduced to replace it.—*Med. Times and Gaz.*, May 20, 1882.

Treatment of Ocular Syphilis with Cyanide of Mercury.—Dr. Galezowski recommends the treatment of ocular syphilis with hypodermic injections of cyanide of mercury, in doses of from five to ten milligrammes. He reports ten cases in which the most marked improvement followed this plan of treatment.—*Le Progrès Méd.*, April 18, 1882.

Iodoform in English Antiseptic Surgery.—As our readers are aware, Prof. Lister made some experiments during the past year with various preparations of eucalyptol, and he is at present testing the suitability of iodoform. Iodoform is chemically nearly related to chloroform, their formulæ differing only in the substitution of the one halogen for the other (Iodoform = CHI_3). Both bodies have powerful antiseptic properties, the addition of less than 1 per cent. of chloroform, for instance, to an animal or vegetable infusion will prevent decomposition for, at least, many months. Iodoform occurs in the form of a dense yellow crystalline powder. Hence it is more convenient than other ordinary antiseptics for the treatment of local sores, for introducing into chronic sinuses, or into scrofulous joints after incision; but it is not easy of application to an amputation or to most other operation wounds; and is quite unsuitable for use with the spray. For this reason, Prof. Lister still operates under the carbolic acid spray, though he now seems to attach rather less importance to its continuous use, and will stop it, for instance, for a short time during an operation if the cloud it produces be found to interfere with a clear view of the wound. The dressings used consist of cotton wool impregnated with iodoform, and the drug itself is, in certain cases, powdered over the wound from a sprinkling-box. "Iodoform wool" has also been extensively used at University College Hospital, and we learn from Mr. Gerard, pharmacist to that hospital, that the great difficulty encountered in preparing the wool is to obtain an even distribution of the iodoform. The desired end is best obtained by treating the powdered drug with ether, in the proportion of about eighty-eight parts of ether to eight of iodoform. In about four pints of this mixture, half a pound of fine clean cotton-wool is soaked for a short time; the wool is afterwards placed in a drug-press. About three pints of ether can be squeezed out, and, when dry, the wool contains about 10 per cent. of iodoform. The same objection is made against this wool as against salicylic wool—namely, that its use spreads about the room an irritating dust, with this further disadvantage, that the odor is to most people very offensive. A little glycerine added to the ether used in its preparation checks the former tendency, and the latter drawback is minimized by the addition of eucalyptus oil. The wool ought to be stored in air-tight boxes, and not handled more than necessary before use. It is too early, as yet, to speak decisively of the value of this antiseptic from experience gained in England, but we believe that it has given a good deal of satisfaction to those who have used it, and has proved itself especially valuable in cases where carbolic acid is, either from idiosyncrasy or from the delicate nature of the parts involved, too irritating to be borne.—*British Med. Journal*, April 15, 1882.

Epidemic of Measles at Lyons.—The *Lyon Méd.* for April 23, states that one of the severest epidemics of measles that has ever been known prevails in that city. During the year 1881, with a population of 372,887, there only occurred ten deaths from measles. During January, 1882, there were two or three deaths per week, and in February they increased to five, and remained stationary. In March the number considerably increased, so that during the last fortnight of that month there were twenty-six deaths; and in April these almost doubled in number, there having been forty-six deaths in the first two weeks. The fatal complications consisted in various forms of broncho-pneumonia, which almost always proved fatal in the hospitals of the town. As has been always observed in the history of this disease, the epidemic was preceded by the prevalence of a catarrhal constitution, which this year was unusually prevalent at Lyons.—*Med. Times and Gaz.*, May 20, 1882.

The Radical Cure of Varicocele by Intravenous Injections of Chloral-hydrate.—Dr. Angelo Negretto records (*Gaz. Med. Ital. Prov. Venete*, Jan 14) two cases of varicocele, in which he succeeded in obtaining a speedy and permanent cure by intravenous injections of chloral-hydrate. In the first case, the patient was aged 28; the varicocele was situated on the left side, turgid, and painful. Dr. Negretto injected, with a Pravaz's syringe, in four different places, a solution of chloral-hydrate, of seven grains to the ounce. At once, a small, hard knot could be felt in the lumen of the vein. Within a few hours, a mild attack of orchitis supervened, which yielded readily to ordinary remedies. The injection was repeated in one or two other spots, with the same result of again inducing orchitis, which, however, was of the mildest possible type. Six days later, all visible traces, both of the operation and the varicocele, had disappeared. Along the course of the spermatic vein a few hard, small, and indolent nuclei could be felt, which corresponded to the seats of the puncture. The author remarks that in this case the obliteration of a few branches of the spermatic vein had evidently been sufficient to effect a cure. The second case occurred in an individual aged 23, in whom varicocele had existed six years. In its leading features it resembled the preceding. Five injections were used, with the result of producing a clot in the vein, followed by slight orchitis. with severe pains radiating from the spermatic cord over the pelvis generally. A week after the last operation the cure was complete; and, as the patient never returned, the author believes it was permanent.—*Lond. Med. Record*, May 15, 1882.

Capillary Drainage of the Abdominal Cavity.—Hegar, of Freiburg, very strongly recommends drainage after all operations, such as ovariotomy (*Centralb. für Gynäk.*, Feb. 1882). He prefers putting pieces of carbolized cotton-wool or sponge into a wide drainage-tube and frequently changing them, especially during the first twenty-four hours. He thinks the abdomen should not be very firmly bandaged, as this has a tendency to interfere with the peristaltic action of the bowel, and so allow it to get forced into the openings in the drainage-tube. For the same reason he advises that the patient should not be kept from moving to a moderate extent. If one simply puts in a drainage-tube and waits for it to overflow into sponges placed on the top of it, then fluid, sufficient to kill, may gather in the abdominal cavity.—*Glasgow Med. Journ.*, May, 1882.

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SATURDAY, JUNE 10, 1882.

IN this issue we have the pleasure of laying before our readers a full report of the proceedings of the American Medical Association, in general session, on Tuesday, Wednesday, and Thursday, of this week, received by telegraph from our special reporter at St. Paul. Unusual interest centres upon this meeting on account of the important ethical questions which came before it. In making so large an expenditure to furnish our readers with the earliest attainable report of its proceedings, we feel that we are in reality but anticipating the future requirements of the profession, and we trust that this enterprise—unparalleled in the history of medical journalism—will prove as gratifying to our readers as its inception has been pleasing to THE MEDICAL NEWS.

THE PRESENT ACTIVITY OF THE MALARIAL POISON.

THE new activity and diffusiveness of malarial poison, whereby districts long exempt from visitation, and new territory hitherto uninvaded, have lately experienced the pathogenetic influence, have awakened on all sides a lively interest in the subject; —trite and yet ever new. The unremitting search for the poison, the periodical proclamation of a newly found germ, and especially the new force with which paludal miasm has been endowed, render it now a topic of surprises when an almost boundless literature already exists. The remarkable extension of malarial diseases within a few years past especially demands consideration.

At the outset, some definitions are necessary. The term *malaria* has been used rather in its etymological than in its technical sense by the public and, to some extent, by physicians—used to signify a poisoned atmosphere rather than a special poison generated under certain special conditions. The popular conception of malaria is an atmosphere vitiated by crowd-poisoning, foul odors, sewer gas, etc.; but, as causative of disease as such a bad air may be, it does not produce the peculiar diseases known to arise from the miasm called *malaria*. To the bad air developed under the conditions of man's present existence, it has been proposed to apply the term *civic malaria*. This phrase may, it is true, have a certain fitness, but it is a distinct misapplication of the technical word malaria. With the definite understanding that we mean by "malaria" a peculiar miasm, producing certain periodical diseases, we proceed to the subject of the extension of malarious diseases within recent times.

When this country was first settled, fever and ague prevailed far up in the valley of the Connecticut, and, also, of the Housatonic River, and other parts of New England. The records still in existence show that malarial fevers disappeared soon after the occupation of the country, and have since appeared in occasional epidemics along the Sound, in the Connecticut River valley, and elsewhere. An epidemic of considerable proportions prevailed at the close of the last century—from 1793 to 1799. A less general epidemic occurred again from 1828 to 1832. From 1832 to 1850 no cases appeared in Connecticut; and from 1836 to 1870, the State of Massachusetts was entirely exempt from malarial influence of sufficient intensity to cause fever. From 1850 until the present, there has been a remarkable growth in the pathogenetic influence of malaria, and an extension of the formative area. The development began in 1850 in New Haven, and continued along the Sound shore until 1864, when it extended northward, reaching Springfield in 1870. Since that time cases have been occurring in the towns of western Massachusetts; but Vermont still remains exempt. The last epidemic prevalence of malarious diseases—from 1870 to 1881—has been the most extensive of any since the settlement of the country. Throughout the Middle and most of the Western States, notably Ohio, the malarial diseases have pursued a similar course. After the first settlement of the country, malaria was produced in much less quantity, or disappeared altogether; but within the last decade it has developed abundantly, and acquired increased activity. Up to the end of 1881, malarial fevers prevailed to an unprecedented degree throughout the whole extent of the malaria-breeding zone.

The reasons for the peculiar behavior of the malarial diseases prevalent in this country are not far to seek. The facts true of New England are equally applicable to all parts of the country. The disappearance of malaria, or diminution in activity, noted

soon after the settlement of a malarious locality, is due to the removal of forests, drainage of swamps, and cultivation of the soil. The immunity thus secured against malarial infection continues so long as the population is sparse and confined to agricultural pursuits. When towns and cities are built, railroads and canals constructed, and great manufacturing establishments utilize the water-courses, the conditions for a new development of malaria exist. The fresh upturning of the soil in making excavations and streets, the stoppage of natural, superficial drainage by new streets, the obstruction of water-courses, and the formation of ponds within the limits of towns, are factors active in the production of malaria, when the annual mean temperature has the necessary height. The building of the New Haven railroad, near tide water, furnishes a good illustration of the evils arising from obstruction of water-courses. So many streams were cut off from their natural ready access to the Sound that now, it is said, there is a marsh or a swamp for an average of every half mile from the Harlem River to New Haven. The influence of this mischievous policy is shown in the annual prevalence of malarial troubles throughout this region, now the abode of a great population. The utilization of the streams, and construction of dams for motive power, is another source of malarial production very common in the States of New York, Connecticut, Rhode Island, Massachusetts, and, indeed, all over the malaria-breeding zone. To these must be added the innumerable swamps and morasses not yet drained, and subjected to overflow and subsequent exposure of the bottom, to a greater or less extent, during the malarial season. Whilst the destruction of forests has had, in one way, a good influence on the public health, it has operated injuriously by favoring inundations—overflow of alluvial valleys—and then subsequent action of high temperature on the vegetable deposits producing malaria abundantly. It is, of course, known to all the world that the condition most favorable to malaria production is the overflow of the sandy alluvium, the subsequent recession of the waters, and a continuous high temperature for several months acting on the vegetable deposits.

The recent outbreak of malarial diseases has been coincident with a rise of the mean annual temperature and a diminution in the annual rainfall. From 1870 to 1880, we were in one of those cycles, nearly correspondent to certain states of the spots on the sun, of increasing annual temperature, as we seem now to have entered on another cycle of depression of the annual mean. The summers of 1870, 1876, and 1880, especially, were very dry and very hot, and the waters of rivers, streams, ponds, and marshes were very low, and hence surfaces containing vast stores of decomposing vegetable matter were exposed for the first time to the action of the sun. Those years were characterized by an extraordinary prevalence of malarial diseases, and by the extension northward of the malaria zone.

It thus becomes perfectly obvious that the means we employ for the extension of man's reign over nature, procure at the same time the development of a poison which strikes a fatal blow at prosperity. We are taught the lesson that, with the building of cities, and railroads, and factories, we must provide the means, as we go along, for securing a proper sanitary state. The economy practised by one generation in failing to provide suitable outlet for drainage, is at the cost, to succeeding generations, of health, and a vast outlay to repair the omissions. Malarial diseases are, to a great extent, preventable even within the malaria zone. The poisoned air of cities, called civic malaria, is equally preventable. The persistence of malaria in situations where it has developed through man's agency, is a reflection on his wisdom and humanity alike. The retention of malaria-breeding agencies, not of man's immediate production, but removable, is a reflection on his boasted civilization. The medical profession has exerted its proper powers in indicating the sources of the mischief—it remains for the authorities acting on behalf of the people to abate a preventable but gigantic evil.

PERMANENT ŒSOPHAGEAL CATHETERISM.

In cases of stricture of the œsophagus from tumors or other causes, the frequency and the painfulness of introducing the catheter, together with the danger of injury to the vascular growths, or of making false passages, have led M. Krishaber, when he has once introduced a catheter, to leave it in the œsophagus permanently. In the *Annales des Maladies de l'Oreille du Larynx, etc.*, for November last, he gives the results of his observations on four cases. Evidently it would be very uncomfortable, if not impractible, to leave a catheter projecting from the mouth. Accordingly he selected the nose as the route to reach the stomach, and then secured the free extremity of the catheter. If a soft rubber instrument cannot be introduced, he first uses a gum catheter, and after several days removes it and immediately replaces it by one of rubber, at the same sitting, and before its path has had time to become embarassed.

One would suppose, *a priori*, that great discomfort, irritation, and even inflammation of the nose, pharynx, œsophagus, or possibly even of the larynx would result, necessitating the removal of the sound; but as a matter of fact, after a few days of slightly painful coryza entire tolerance was established in the parts, to such an extent, indeed, that in the cases reported the tube had remained in place, re-

spectively, for 46, 165, 305, and 251 days, and in the last case was still there. We should advise an occasional immediate replacement of such an instrument by a new one, lest the first should become rotten and break.

Milk and other liquid food, and even finely cut meat, can be administered by quite small tubes, and the patient can sometimes swallow liquids to a slight extent, these passing into the stomach by the side of the catheter.

Another important suggestion, already acted upon by Verneuil, is that such a method of catheterism can be used to advantage in other cases, such as ablation of the tongue, resection of the jaw, and in operations on the lips and palate, in which absolute rest of the parts operated upon is required. In such instances, of course, toleration of the catheter should be obtained some time before the operation. In cases of glosso-labio-laryngeal paralysis, the self-starvation of insanity, in coma, etc., it may also prove of service.

REFLEX ACCIDENTS OCCURRING FROM THE OPERATION FOR EMPYEMA.

DR. G. MARTIN has made the reflex accidents following the operation for empyema, the subject of a thesis. He states that Hoffman, Sauvages, and others, had observed paralysis of the upper extremities occur in the course of empyema. In 1875 Raymond witnessed epileptiform convulsions under the same circumstances, and since, Brouardel, Lépine, Leudet, Goodhart, Williams, Butlin, Cayley, J. Simon, and others, had seen monoplegia, hemiplegia, and similar accidents follow. These reflex disturbances are excited by operative interference, and occur usually within the first month, but sometimes, as in the case narrated by Leudet, not until about a year had elapsed. From the twentieth to the thirtieth year these reflex accidents are most apt to occur, but they have been observed in infants. Sometimes they come on abruptly, sometimes insidiously. They consist of epileptiform seizures, contractures, and paralyses. The last mentioned occur on the side on which the empyema is situated. Ordinarily, the paralyses are incomplete, and subject to considerable fluctuations, but do not include sensibility. The mechanism of these reflex disturbances yet awaits an explanation. Are they due to irritation of the phrenic, or of the centripetal branches of the pneumogastric, or do they depend on an anæmia of the medulla oblangata, are questions asked, but not answered, by Dr. Martin.

It may be well to remind our readers that two classes of accidents result from the operations for empyema: immediate, and due to causes connected with the operative procedure, or with the condition of the thoracic organs; and reflex, of the kind mentioned above, the nature of which is unknown.

CONGRESS AND THE LIBRARY AND MUSEUM OF THE SURGEON-GENERAL'S OFFICE.

WE regret exceedingly to learn that the Senate Committee have cut down the usual annual appropriation of $10,000 for the Library of the Surgeon-General's Office and the Army Medical Museum to $5000. They who know how valuable these two objects are to the medical profession of the entire country, and we might even very justly say of the world, and through them to suffering humanity, will most deeply regret a parsimony which saves a paltry $5000 at this point, and yet proposes (as the House Committee does) to spend over $17,000,000 in the River and Harbor Bill!

No one who has experienced the open-handed liberality of the Library but will wish to aid it. To these all over the country, we say, they must act, and act *quickly*. Let them write *to-day* to their Senators whether they know them or not, and strongly urge the restoration of the usual appropriation.

We most earnestly hope there will be no question raised as to the appropriation for continuing the publication of the *Index Catalogue*. It would be not a national but an international calamity.

THE AMERICAN MEDICAL ASSOCIATION AND THE NEW YORK CODE.

PROBABLY quackery, both within and without the profession, has never received so severe a rebuke as has just been dealt it by the American Medical Association at St. Paul, and it is gratifying to observe that in taking this decisive step, the profession, as represented by its delegates there assembled, was unanimous in its sentiments.

No one, however, who had observed the indications afforded by the medical press, the action of State and county societies, and the expressed opinions of intelligent physicians all over the country, could have felt any doubt as to the result. It was clearly, as we indicated in our last number, an issue between the profession and the advocates of the New York Code, and with such unequally matched opponents, the dispute could be settled but in one way. The strength of the victors did not, however, lie merely in their numbers, but rather in the essential integrity and justice of their cause. In spite of individual exceptions, the profession to which we belong has been for centuries pre-eminent in its devotion to the best interests of humanity and to the principles of science as they were at any particular time understood. It is not less so to-day, and within the last hundred years there has been a strong infusion of common sense, a wider appreciation of the value

of experience and observation as compared with dogma and tradition, and an ever-increasing desire to make medicine at once the most scientific and liberal, as it is the most useful and benevolent, of the professions.

Pretence, folly, humbug, quackery, dishonesty, have never in all time had so poor a chance for success within our ranks as they have to-day; the educated and conscientious practitioner has never been so clearly differentiated from the charlatans and the imbeciles who surround him, and who either ape without comprehending his methods, or attain a temporary notoriety by decrying them.

The days of witchcraft, of charms, spells, and incantations are long since past, and those of "infinitesimals," "provings," and "similars" are numbered. To ask us now to admit to terms of equality the eclectic, the clairvoyant, the herbalist, or the homœopath, is to ask us, with a firm foothold on the rock of scientific truth, to step backward into the quicksands of bigotry and superstition.

Human nature is imperfect; even the rational scepticism of to-day may have its excesses, and give rise to what Gladstone calls "the rival folly of credulity." Doubtless, some new medical philosopher's stone will ere long be discovered to turn disease into health, or death into life, and will have its real or pretended disciples; but they will, beyond all doubt, have to fight against overwhelming odds, and can not anticipate even as wide or as long-continued success as any of their predecessors.

Popular education, the diffusion of knowledge, and its application to practical purposes, the consequent increasing familiarity of the public with the methods and results of scientific reasoning, the widening gulf thus established between rational medicine and those hybrids or parasites which claim to be its rival, these have had, and will continue to have, their share in hastening the downfall of charlatanry. But above them all we place the influence of the vast body of intelligent, conscientious, truthful, and hard-working practitioners who constitute the regular profession of this and other countries. Ever eager for information which may benefit their patients; sparing neither time, nor labor, nor health, in the endeavor to obtain it; observing, comparing, recording, under the most trying or even dangerous circumstances; earning the rewards of gallantry by their self-sacrifice in times of war and of pestilence; or less conspicuously, but no less courageously, braving death in the fever ward, the laboratory, or the dead-room; they are, as a class, steadily winning the respect and admiration of mankind.

When they speak as a body the world listens, and when they unanimously express a deliberate and unvarying conviction that any theory of medicine which aspires to popular favor is a delusion or an unproved dogma, they have rendered it impossible for that system long to survive among the educated and thinking classes of the community.

If their influence is thus powerful for good, it would be equally powerful for harm, and we, therefore, include the entire population of the country in our congratulations on the refusal of this body of men, through their representatives at St. Paul, to compromise with or in any way to aid or recognize the various forms of medical quackery which prey upon the purses and the lives of the public.

No more important step has been taken by the profession since the organization of the American Medical Asssociation, which we may also congratulate as having preserved intact its recognized reputation for consistency, probity, and wisdom.

THE AMERICAN SURGICAL ASSOCIATION.

THE meeting of the American Surgical Association, the proceedings of which we publish in our present issue, was in every way a success—a success all the more gratifying in view of the precarious existence it has heretofore led. Indeed, this meeting may be said to have made it an established institution. Its roll of membership—100—is full, and those desiring to become Fellows must ask, rather than be asked, hereafter.

Leading surgeons, such as the two Grosses, Agnew, Hutchison, Gunn, McGuire, Dawson, Cabell, Gouley, Kinloch, Levis, and many others were present and took part in the proceedings. The Association was entertained most hospitably by the President, Dr. S. D. Gross, and by Drs. Agnew, Mears, S. W. Gross, Brinton, and Levis. The absence of most of the Boston and New York men was noticeable, and was very much regretted.

CARLYLE AND THE DOCTORS.

THE "Reminiscences" have quite dispelled many of the illusions of which Carlyle was the object during the earthly existence of his singular personality. Stern, uncompromising, truthful, he was known to be, and loyal and just all believed. His last deliberate utterances disclose a character profoundly selfish, and incapable of kindly judgment of any human being, except of his own kin. These ungracious qualities are well displayed in the account he gives of the physicians who were unwearied in their attentions to Mrs. Carlyle during her last illness.

"The Doctors were many: Dr. Quain (who would take no fees), the most assiduous; Dr. Blakiston (ditto), from St. Leonard's, express one time; speaking hope, always, both of these, and most industrious to help, with many more whom I did not even see. When any new miraculous kind of doctor

was recommended as such, my poor, struggling martyr, conscious too of grasping at mere straws, could not but wish to see him; and he came, did his mischief, and went away." A change of scene was proposed, and St. Leonard's by the sea suggested. Dr. Blakiston, who lived there, generously offered the use of his house to Mrs. Carlyle, and refused compensation. This is the way in which Carlyle viewed this benevolence. "The remuneration he had expected was to make a distinguished cure over the heads of so many London rivals. Money for the use of two rooms in his house, we might have anticipated, but did not altogether, he would regard with sovereign superiority."

For a month or more Mrs. Carlyle enjoyed the superior comforts of Dr. Blakiston's house, and yet he seems to have regarded the well-intended kindness as meant for personal ends only. He does say, in the course of his narrative, "Ah me! Dr. Blakiston was really kind," but he makes it plain that, according to his theory, this kindness was dictated by the desire to excel his "London rivals."

SOCIETY PROCEEDINGS.

THE AMERICAN MEDICAL ASSOCIATION.

Thirty-third Annual Meeting, held at St. Paul, June 6, 7, 8, and 9, 1882.

(*By Telegraph from our Special Reporter.*)

THE thirty-third annual session of the American Medical Association convened at St. Paul on Tuesday, June 6, at 11 o'clock, VICE-PRESIDENT, P. O. HOOPER, of Arkansas, in the Chair.

The proceeding were opened by prayer by the Right Reverend John Ireland.

GENERAL LUCIUS F. HUBBARD, Governor of Minnesota, in an

ADDRESS OF WELCOME,

tendered to the delegates the hospitalities of the State, and invited their attention to the special attractions and advantages of its soil and climate. He said, "there is a characteristic of our country of peculiar interest to, and invites the investigation of, gentlemen of your profession. I refer to the exhilarating and vitalizing influence of our climate, which has made Minnesota the Mecca for health-searchers in years past, and as a direct result of your visit at this time we shall expect to greatly widen and strengthen our reputation in that regard. With assurances of health that do not disappoint, and opportunities for the acquisition of wealth that can but satisfy, we invite the brain and muscle of the world to a home in our midst." General Hubbard concluded with a few words expressing the interest and sympathy of the people in the deliberations of the Convention.

DR. A. J. STONE, of St. Paul, Chairman of the

COMMITTEE OF ARRANGEMENTS,

extended an invitation to the ex-Presidents and Vice-Presidents to occupy seats on the platform. The invitation was accepted by Drs. L. A. Sayre, of New York; N. S. Davis, of Chicago; J. M. Toner, of Washington; and Beverly Cole, of San Francisco.

Dr. Stone also announced a programme of railroad excursions, receptions, and entertainments by private citizens, and a grand banquet by the profession and citizens this evening at the Metropolitan Hotel.

Protests from the Philadelphia County, the St. Louis, the District of Columbia, the Æsculapean, the Wabash Valley, the Grant County (Indiana) Societies, and the State Societies of Georgia, Pennsylvania, Arkansas, Kentucky, Tennessee, Missouri, and others; in fact, from the whole Union, he said, were announced by the Secretary as having been received against the admission of delegates from

THE NEW YORK STATE MEDICAL SOCIETY,

and condemning its course in reference to the Code of Ethics. These protests were referred to the Judicial Council.

The Secretary also read the following letters:

NEW YORK, May 27, 1882.

TO WM. MANLIUS SMITH, M.D.,
Secretary of the Medical Society of the State of New York.

DEAR SIR: I have just received a certificate of my appointment as delegate from the Medical Society of the State of New York, to the American Medical Association, which is to meet at St. Paul on the 6th of June next. As the State Society has passed a resolution ignoring the Code of Ethics which bound them as members of the American Medical Association, I cannot see how they can expect their delegates to be received into an Association whose laws they are not willing to obey, and which must necessarily, therefore, refuse them admittance. I must therefore respectfully decline to act as delegate, and therefore return my certificate.

Respectfully, LEWIS A. SAYRE.

PHILADELPHIA, MAY 30, 1882.

To the Acting President
of the American Medical Asssociation.

DEAR SIR: I deeply regret that engagements from which it is impossible to extricate myself, will deprive me of the pleasure of attending the meeting of the Association at St. Paul, and of participating in its deliberations, which promise to be of more than ordinary interest on account of the extraordinary proceedings of the New York State Medical Society. I regard these proceedings as an outrage which every member of the profession should consider as a deep personal insult, and which the Association should rebuke in most stern and uncompromising manner.

Hoping that the approaching meeting will be a success, and that its deliberations will be conducted with that wisdom and calm judgment which have heretofore characterized them, I am, dear sir,

Very truly and respectfully,
Your friend and obedient servant,
S. D. GROSS.

In the absence of J. J. Woodward, M.D., the President of the Association, who was obliged to go abroad on account of his health, DR. P. O. HOOPER, of Arkansas, the first Vice-President, delivered

THE ANNUAL ADDRESS.

He regretted that the illness of Dr. Woodward prevented his presiding at this meeting, and he accepted with diffidence the Presidential duties which thereby devolved upon him. He expressed the thanks of the Association to the citizens of St. Paul, for the cordial reception which they had extended. He sketched the history of the Association, its aims, and the success it had attained, and claimed that it had greatly aided the cause of reform in medical education. He thought that the influence of the Association would be further increased by substituting a weekly journal for the annual volume of transactions. To the Association belongs the honor of insisting upon the importance of health laws. As a result, State Boards of Health have

been established, and recently, the National Board of Health. He sketched the progress which had been made within the last year in all branches of science, and particularly in medical science. He dwelt upon the importance of preventing the introduction into communities of contagious diseases, and claimed that small-pox can be stamped out by efficient vaccination and revaccination, and he urged that vaccination be made compulsory in all the States of the Union. He recommended to the Association the propriety of organizing a relief society for the benefit of the families of physicians left in destitute circumstances. He directed attention to the position taken by the New York State Medical Society, which endangered the very foundation of the Code of Medical Ethics, and stated that, as the matter was referred to the Judicial Council, whose decision would be final, he would refrain from further comment. In concluding, he paid a glowing tribute to the President of last year, Dr. J. T. Hodgen, whose recent death at St. Louis is so deeply deplored, and to Dr. J. J. Woodward, who is now in Europe to recuperate his health.

On motion, the thanks of the Association were tendered the President for the Address and a copy was requested for publication.

The SECRETARY read a letter from

DR. J. J. WOODWARD,

dated Washington, January 31st, 1882, expressing his deep regret at his inability to be present at the meeting of the Association.

On motion of Dr. J. Solis Cohen, of Philadelphia, a cablegram was ordered to be sent to Dr. Woodward, regretting his absence and expressing the earnest hopes of the Association for his speedy recovery.

DR. N. S. DAVIS, of Chicago, presented the following resolutions from the

WOMEN'S NATIONAL CHRISTIAN TEMPERANCE UNION.

Whereas, We approve teaching the children and youth in the schools and educational institutions in this country, as facts of hygiene, the physiological dangers and evils resulting from the use of alcoholic beverages; and

Whereas, It is the acknowledged duty of the State to provide for such education of the people as is essential to good citizenship,

Resolved, That we recommend the State Legislature to enact laws requiring the physiological dangers and evils resulting from the use of alcoholic beverages to be taught in schools supported by public money, or under State control.

Referred to the Section on State Medicine.

THE REGISTER OF MEMBERS

was read by the Secretary, and 883 delegates were shown to be present, constituting the largest meeting ever held, with the exception of the meeting in New York in 1880.

On motion, the members of the Minnesota State Medical Society now in session at St. Paul, were made members by invitation.

INVITATION TO ATLANTIC CITY, N. J.

A communication was presented, inviting the Association to hold its next Annual Meeting at Atlantic City, N. J., in June, 1883, and offering free hotel accommodation to the members. Referred to the Committee on Nominations.

SECOND DAY—JUNE 7TH.

INVITATIONS.

DR. A. J. STONE, Chairman of the Committee of Arrangements, presented a communication from the Mayor and Council of Fargo, Dakota Territory, inviting the Association to visit Fargo as the guests of the citizens, and offering free transportation.

Excursions were announced for Thursday, to Stillwater and White Bear Lakes.

THE COMMITTEE ON NOMINATIONS

was announced as follows: Arkansas, J. A. Dibrell, Jr.; California, H. S. Orme; Colorado, J. Hawes; Connecticut, Bronson; Dakota, S. B. McGrumpy; District of Columbia, W. V. Marmion; Georgia, Wm. F. Holt; Illinois, T. F. Worrell; Indiana, Lomax; Iowa, T. J. Caldwell; Kansas, J. Bell; Kentucky, L. S. McMurtry; Louisiana, Drysree; Maine, Foster; Maryland, Wm. Lee; Michigan, Foster Pratt; Massachusetts, M. G. Parker; Minnesota, W. W. Mayo; Missouri, A. J. Steele; Mississippi, Harris A. Gant; Nebraska, Abbot; North Carolina, Eugene Grissom; New Hampshire, Davis; New York, N. C. Husted; New Jersey, S. S. Clark; Ohio, Scott; Pennsylvania, A. Frické; Rhode Island, A. Ballou; Tennessee, Lindsley; Texas, W. H. Hart; Virginia, F. D. Cunningham; Vermont, Thayer; Wisconsin, N. Senn; U. S. Army, Glover Perrin; U. S. Navy, John M. Brown; U. S. Marine Hospital Service, Miller.

NEXT PLACE OF MEETING.

THE PRESIDENT announced the reception of invitations to the Association to meet at Cleveland, Detroit, and other places. Referred to the Committee on Nominations.

On motion of DR. J. E. REEVES, the necessary

TRAVELLING EXPENSES OF THE TREASURER

were ordered to be paid.

DECLARATION OF PRINCIPLES.

DR. CHAS. DENNISON, of Colorado, offered the following: "In order to correct a misconception which largely exists in the public mind, and to some extent prevails among members of the medical profession, as to the liberty of action authorized by this Association in the treatment of disease, we deem it proper to make a declaration of principles broadly applicable to the healing art as sanctioned and practised under our Code, to wit: Rational medicine, being based on experience and pathological research, demands absolute freedom in the selection and method of administration of materia medica, and there is nothing in the Code of Ethics of the American Medical Association prohibiting the use by its members of any known and honorable means of combating disease. Furthermore, as contributing to the alleviation of human suffering, we hail with pleasure and gratitude every discovery in etiological and therapeutical science by whomsoever made. We, therefore, reject as untrue and obnoxious the term 'allopathist' as applied to members of this Association, by dogmatists and extremists without its fold: First, because it tends to convey the erroneous impression that we are restricted in the choice of remedies and the method of using them by other than the limits of rational science. Second, because for any association of men claiming to practice the profession of medicine, to adopt a name based upon limited and conjectural theories of therapeutics for the purpose of designating a particular school of medicine, we have always and still regard as unscientific in principle and dangerous in practice."

Referred to the Judicial Council.

DR. J. H. PACKARD, of Philadelphia, read the

REPORT OF THE COMMITTEE ON JOURNALIZING THE TRANSACTIONS.

He recommended the establishment of a weekly medical journal under the control of nine trustees, three to be elected each year and to serve for three

years. The editor's salary to be $6000 per annum, he to pay the salary of the assistants. The Journal to be entitled "The Journal of the American Medical Association." The subscription price to non-members of the Association to be six dollars per year. The Committee propose that the board of trustees should send out circulars to every regular physician whose address could be obtained, and if within three months the answers should be sufficiently encouraging—say 2000 subscribers pledged, the Board should then elect an editor and complete the arrangements for early publication.

The report was accepted, and made the special order of business for Thursday morning.

AN AMENDMENT TO BY-LAWS

allowing permanent members to vote was laid upon the table.

THE ADDRESS IN MEDICINE

was read by DR. J. A. OCTERLONY, of Louisville (see p. 621).

REPORT FROM THE JUDICIAL COUNCIL.

In reference to the *Nebraska State Medical Society*, the Judicial Council reported that careful examination of the documents and matters involved in the protest of certain members of the Nebraska State Medical Society against the admission of said Society to representation in the American Medical Association shows no proper cause for such protest at the present time, and consequently the Society is entitled to its full representation by delegates in this Association.

In regard to the resolution concerning the use of *remedies controlled by a patent, copyright, or trade-mark*, etc., which was reported from the Section on Practical Medicine and Materia Medica, and by the Association referred to the Judicial Council last year, the Council has decided, after careful examination, that, inasmuch as said resolution includes matters not referred to in the Code of Ethics, and said Code contains all that is necessary for the proper guidance of members of the medical profession, therefore the resolution should not be adopted by the Association.

Third, in regard to the protests against the action and reception of the delegates from the *New York State Medical Society*, which was referred to them, the Judicial Council reports as follows: Having carefully examined the Code of Ethics adopted by the New York State Medical Society, at its annual meeting in February, 1882, as furnished by the Secretary of the said Society, the Judicial Council find in said devised Code provisions essentially different from and in conflict with the Code of Ethics of this Association, and, therefore, in accordance with the provision of the ninth by-law of this Association, decide *unanimously* that the said New York State Medical Society is not entitled to representation by delegates in the American Medical Association.

The conclusion of the report was received with prolonged and enthusiastic applause.

DR. H. O. MARCY, of Boston, delivered the

ADDRESS IN OBSTETRICS.

The subject was uterine fibroids, and the lecture was illustrated by microscopic preparations thrown on the screen by the solar microscope.

Adjourned.

THIRD DAY—JUNE 8TH.

THE CODE OF ETHICS.

THE SECRETARY announced the receipt of a communication from the Committee on Ethics of the State Medical Society of Colorado, to the effect that it will report at its next session in favor of maintaining the provisions in relation to consultations of the time-honored Code of the American Medical Association; also the resolutions of the Medical Association of Georgia, at its recent annual session (see THE MEDICAL NEWS, June 3, p. 619). These communications were received with applause.

CHANGE OF TITLE OF SECTION VII.

DR. D. H. GOODWILLIE, of New York, moved that the name of Section VII. be changed from that of "Section on Dentistry," to "Section on Dental and Oral Surgery." Adopted.

THE COMMITTEE ON NOMINATIONS

presented the following report.

The next place of meeting, Cleveland, Ohio.

For *President*, John L. Atlee, M.D., of Lancaster, Penna. *Vice-Presidents*, Drs. Eugene Grissom, of North Carolina; A. J. Stone, of St. Paul, Minn.; J. A. Octerlony, of Louisville, Ky.; and H. S. Orme, of California. *Treasurer*, R. J. Dunglison, M.D., of Philadelphia. *Librarian*, Wm. Lee, M.D., of District of Columbia. *Judicial Council*, N. S. Davis, of Illinois; J. M. Brown, U. S. N.; X. C. Scott, of Ohio; M. Sexton, of Indiana; N. C. Husted, of New York; Wm. Lee, of District of Columbia; and J. E. Reeves, of West Virginia.

The report was referred back to the Committee, as it contained nominations which were rendered ineligible by absence of the nominees.

THE JOURNALIZING OF THE TRANSACTIONS

was the next special order of business. In the absence of Dr. Packard, DR. N. S. DAVIS, of Illinois, introduced the discussion. He said he did not sympathize with the unjust criticisms which had been urged against the annual volume of transactions. He offered the following resolutions:

Resolved, That the interests of the Association would be promoted by the publication of its transactions in a weekly journal, under its own control, instead of in an annual volume as heretofore, provided that it could be done without involving pecuniary embarrassment, or so far engrossing its funds as to prevent the annual encouragement of original investigation by its members.

Resolved, That so much of the report of the Committee on Journalizing Transactions as relates to increase of membership of this Association by application from members of State and local societies be and the same is hereby approved.

Resolved, That so much of the report as relates to the appointment of a Board of Trustees, nine in number, and their duties, be and the same is hereby adopted, and that the President of the Association now appoint a special committee of seven, to recommend to this meeting of the Association the names of nine members for election, to constitute said Board.

Resolved, That the Board of Trustees so appointed be requested to proceed as early as possible to agree upon a plan of a "Medical Journal of the American Medical Association," and to send circulars, explaining such plan, and asking pledges of support by actual subscription, to the members of the medical profession throughout the whole country, and, therefore, ascertain as reliably as possible what degree of support the proposed journal can have, as a basis for commencing its publication, and that said Board also proceed to ascertain and agree upon the best method of publishing such journal, the best editorial services it can secure to take charge of the work, and the best plan of its issue.

Resolved, That said Board of Trustees is hereby instructed, under all circumstances, in whatever plans or contracts it proposes, to retain entire control over the advertising as well as all other pages of the journal that it is proposed to establish, and that said Board report in full at next meeting of this Association plans

upon which it has been able to agree, together with response of the profession to its circulars asking actual subscription to the proposed journal, and that the constitutional amendments proposed by Dr. Packard last year be continued upon the table until the report of the Board of Trustees is received and acted upon.

Resolved,. That the Treasurer of this Association is hereby authorized to pay out of funds in the treasury the necessary expenses of the Board of Trustees, in printing and distributing its circulars, and in conducting its proper correspondence.

Resolved, That the Committee on Publication proceed to publish the proceedings and transactions of this present meeting in a volume as heretofore, using all diligence to give it an early distribution to those entitled to receive it.

Adopted.

DR. GIBSON, from the Section on State Medicine, presented the following resolutions:

EXPERT TESTIMONY.

Resolved, That the American Medical Association deems it advisable, and conducive to the ends of justice, that medical men shall be called as expert witnesses directly by the Court, instead of, as now, being called by either side of a suit in litigation.

Laid on the table.

A NATIONAL MUSEUM OF HYGIENE.

Resolved, That this Association heartily endorses and commends to Congress the proposition of the Surgeon-General of the Navy to establish at Washington, in connection with the Bureau of Medicine and Surgery of the Navy Department, and in co-operation with the American Public Health Association, and the American Medical Association, a National Museum of Hygiene, which shall exhibit the history and progress of sanitary science by a collection of publications, articles, models, drawings, etc., illustrating defects and improvements in foods, in water supply, bedding, clothing, marine architecture, house and hospital construction and furniture, apparatus for heating, illumination, ventilation, and removal of excreta, and refuse culinary, laundry, and bath facilities, and for physical culture and exercise, and whatever else tends to the preservation of health and prevention of disease.

Resolved, that the Association earnestly urges upon Congress the appropriation of the sum of ten thousand dollars which has been recommended for the purchase of exhibits and their subsequent care and preservation, and that the Secretary shall, without delay, send a copy of the above resolutions to each member of the Senate and House of Representatives in Congress and to the heads of Departments.

Adopted.

THE MUSEUM AND LIBRARY OF THE SURGEON-GENERAL'S OFFICE.

DR. N. S. DAVIS, of Illinois, offered the following:

Whereas, It appears from amended form of bill making appropriations for the army for 1882 to 1883, as recommended by the Military Committee of the Senate, that the amount appropriated for the support of the Army Medical Museum and Library has been reduced from ten thousand to five thousand dollars; therefore

Resolved, That this Association views with great regret and strong disapproval this attempt to cripple two institutions, whose great value is recognized by the medical profession of the United States as well as of Europe. That in the case of the library, whose collection of medical journals has required years of unceasing effort to bring to its present completeness, the intended reduction will be specially injurious, as from their transient character such publications would be in many instances irretrievably lost. That the publication now in progress of the *Index Catalogue* of the library of the Surgeon-General's Office is the most extensive work of the kind ever attempted, which makes it desirable that its completeness should not be lessened by the withdrawal of the means to procure current medical literature, therefore this Association expresses the earnest hope that Congress will restore the appropriation to its former amount, in the interest of the medical profession, and, therefore, of the community at large. Adopted.

DR. SMITH, of Dakota Territory, offered the following

AMENDMENT TO THE CONSTITUTION:

Whereas, There are now employed between sixty and seventy physicians in the United States Indian Service by authority of the Secretary of the Interior; and

Whereas, All physicians appointed to positions in the United States Indian Service are required to be graduates of some regular medical college; and

Whereas, There are now between 150,000 and 200,000 Indians depending entirely upon those appointed physicians for all medical and surgical treatment; and

Whereas, The present humane policy of our government is rapidly advancing the Indian civilization, thereby lessening the dependence on, and the consequent power of, the Indian Medicine Man, and greatly increasing the demand for, and labors of, the regularly appointed qualified physicians; therefore be it

Resolved, That the Constitution of the American Medical Association be so amended as to provide for the admission to its membership of two delegates from the Medical Bureau of the United States Indian Service, to be nominated by the Surgeon-in-Chief of the Indian Medical Bureau, and appointed by the Secretary of the Interior.

Resolved, Also, that this resolution shall take immediate effect.

Laid over under the rules.

DR. J. M. TONER, of Washington, offered the report of the

COMMITTEE ON NECROLOGY,

which contained notices of sixty individuals. Referred to the Committee on Publication.

THE COMMITTEE ON METEOROLOGY

reported progress through Dr. N. S. Davis, of Illinois, and that its work began systematically in January, 1882; that observation stations had been established in various parts of the United States, and that the co-operation of the United States Signal Service Bureau had been secured; and it was recommended that $500 be annually appropriated to Prof. Long, of Chicago, to superintend and classify the reports. And the report concluded with the following resolutions:

Resolved, That the Standing Committee on atmospheric conditions, and their relations to the prevalence of acute diseases, be continued, and that the unexpended balance of the appropriation (nearly $300) of last year be continued at the disposal of the committee for defraying necessary expenses incurred in prosecuting the work assigned during the coming year.

Resolved, That an additional appropriation of five hundred dollars be placed at the disposal of the same Committee for the special purpose of establishing a single station for the determination and recording of the relative amount of organized constituents in the atmosphere for one year, according to the method reported by Prof. Remsen; and that the Treasurer be authorized to pay the same on order of the Chairman of said Committee.

MISCELLANEOUS.

DR. W. A. BYRD, of Quincy, Ill., read the *Address in Surgery* and DR. GIHON, U. S. N., the *Address in State Medicine*.

The President announced the following committee on the nomination of a Board of Trustees for the Journal: Drs. L. A. Sayre, J. M. Toner, Foster Pratt, R. J. Dunglison, R. Battey, W. F. Peck, and H. O. Marcy.

Adjourned.

AMERICAN SURGICAL ASSOCIATION.

Third Annual Session, held in Philadelphia, May 31, June 1 and 2, 1882.

(Specially reported for THE MEDICAL NEWS.)

FIRST MEETING, MAY 31. The Association was called to order at 11 A. M., and PROF. S. D. GROSS, President, delivered the

ADDRESS OF WELCOME.

"Gentlemen of the American Surgical Association: The executive committee in charge of this meeting, which I now formally open, have assigned to me the pleasing duty of congratulating you upon your arrival in our city, and of welcoming you to our homes and hearts. It would be needless to indulge in assurances of what we are going to do for you, but this I may say, that, as good and loyal brothers, we shall spare no efforts to make your time pass agreeably and profitably. A reunion like this may be viewed under two aspects, the practical and the social. Naturally the first object is the former, and the programme which has been placed into your hands is sufficient evidence that we mean work. The meetings heretofore, with the exception of the one held at Coney Island last September, were all of a strictly executive character, intended simply to perfect the organization of the Association, and to put us in a better position for future usefulness. Hardly less important than this is the social feature of such a reunion. To cultivate kindly feeling, and to strengthen and cement the bonds of good fellowship are objects of the highest consideration. If such a meeting were intended only for the discussion of scientific papers, and the presentation of cases of disease and accidents, it would indeed be a cold and tame, if not heartless, affair.

"The question has been asked, perhaps pertinently enough, what need is there of such an organization as this, seeing that the country is full of all sorts of medical societies? The answer is not difficult; at all events, I do not find it so. We have in the United States, according to a reasonable estimate, not fewer than 60,000 medical men. Among these are large numbers of surgeons, who, in point of culture, practical skill, and reputation as writers and teachers, would be an honor to any country, however high its standard of excellence. To unite these men into one harmonious whole, for the benefit of all, is one of the main objects which the founders of the American Surgical Association had in view when they met at Atlanta in May, 1879. If it be said that we are striking a blow at the American Medical Association, we deny the soft impeachment. On the contrary, we shall strengthen that body by rousing it from its Rip Van Winkle slumbers, and infusing new life into it. We can hurt no society now in existence, or likely come into existence hereafter. We can only hurt ourselves, if we fail to do our duty. We hope to make the American Surgical Association an altar upon which we may annually lay our contributions to Surgical Science, and so show to the world that we are earnest and zealous laborers in the interest of human progress and human suffering. We live in a fast age. Our heritage has come to us in pleasant places and under a propitious sky. Progress stares us everywhere in the face. The surgical profession was never so busy as it is at the present moment; never so fruitful in great and beneficent results, or in bold and daring exploits. Many of the best minds in this and other countries are at work in perfecting our knowledge, and placing it upon an immutable basis. Theory has given way to fact, and nothing that cannot withstand this test is worthy of acceptance. The whole field of surgery, from the structure of a boil upon a man's face to an amputation of the hip-joint, is undergoing revision. Operative surgery challenges the respect and admiration of the world, and, if it has not attained its finality, it is as nearly perfect as we can hope to make it. Therapeutic surgery, too, is making rapid strides; and surgical pathology was never more zealously, or more successfully, cultivated. New avenues are constantly being opened, and the importance of the study of physiology, in its relations to practical surgery, is daily becoming more and more apparent. In short, in whatever direction we cast our eyes, nothing but the most substantial encouragement greets our vision, and urges us on to increased exertion.

"Since our last meeting death has been busy in our ranks. Some of our best and most eminent members have dropped by the way-side, in the midst of their work and in the height of their usefulness. Their seats in this Association will no more be occupied by them. The list comprises the distinguished names of J. C. Hughes, of Keokuk; W. Warren Greene, of Portland; Hugh W. Brock, of Morgantown, West Virginia; John T. Hodgen, of St. Louis; and James R. Wood, of New York. To these may be added that of H. Lenox Hodge, who died early last summer, deeply regretted wherever he was known. The death of these men, all widely known and recognized as able teachers and practitioners, is a signal loss to the profession and to the country. I would respectfully suggest that proper action be taken by the Association, expressive of our deep sorrow and our warmest sympathy with the families of the deceased. The departure from among us of so many of our most prominent members within a few months of each other, at this early period of our organization, is a calamity of no ordinary nature."

The roll was then called, and the minutes of the last meeting, at Coney Island, September, 1881, were read and approved.

ELECTION OF MEMBERS.

The Association then went into executive session, after which it was announced that Dr. Willard Parker, of New York; Dr. J. L. Atlee, of Lancaster, Pa.; Dr. Wm. Hunt, of Philadelphia; Dr. J. Marion Sims, of New York; and Dr. A. C. Post, of New York, had been elected honorary members.

Thirty-eight candidates for active membership were also announced to have been elected. Among them were Dr. J. Collins Warren, Dr. D. Hayes Agnew, Dr. Allan Smith, Dr. Wm. S. Forbes, Dr. N. R. Bozeman, Dr. D. W. Cheever, and Dr. R. M. Hodges.

The afternoon meeting was called to order at 3 P. M., Dr. J. C. Hutchison in the Chair.

J. L. CABELL, M.D., Professor of Surgery in the University of Virginia, read the first paper of the session, on

SANITARY CONDITIONS IN RELATION TO THE TREATMENT OF SURGICAL OPERATIONS AND INJURIES.

Statistics, he said, show that, while the mortality after certain operations, heretofore regarded as exceedingly dangerous, especially those involving abdominal section, has been greatly reduced, the death-rate of amputations and excision of joints has not diminished in an equal ratio. The progressive diminution of the mortality in the former class of operations, notably the operation of ovariotomy, is doubtless due, in some measure, to improved methods of operative procedure, which it is probable have now reached final perfection, but in a yet larger measure is attributable to more care-

ful and systematic attention to sanitary conditions, including the employment of antiseptic precautions during and after the operation.

The continued high rate of mortality after amputations in city hospitals, whence the most trustworthy statistics have been derived, stands in singular contrast with a decided decrease of the general mortality of many of the same cities, and seem to show, Mr. Erichsen thinks, that "the sanitary improvement of hospitals has not kept pace with that of the towns in which they are situated." But there is an obvious source of fallacy in drawing so sweeping a conclusion from the death-rate of operations in hospitals. The influences which affect the results of operations are so numerous and varied that it would be illogical to select any one of them, such as the locality in which the hospital is placed, and to attribute the results to its agency, on the arbitrary assumption that, if we compare a sufficiently large number of cases, all other influences neutralize each other. Freedom from septic diseases would be a much better test of the sanitary condition of a hospital than that derived from its mortality returns.

Why, then, has not the mortality after amputations been reduced in a somewhat corresponding ratio with the marvellous diminution of the death-rate of ovariotomy. Is a death-rate of twenty-two per cent. for all amputations above the wrist and ankle the best that can be hoped for under the most favorable circumstances? Or is this high mortality only incidental to hospitals, and a necessary result of unhealthy influences inseparable from the aggregation of numbers of sick or wounded patients? It is not easy to find a satisfactory solution of this problem by referring to the somewhat equivocal and uncertain test of mortuary statistics. The various influences which favor or oppose the healthy repair of wounds should be separately considered.

It is impossible to compare exactly hospital experience with that of private cases. The prime factor in the repair of wounds being healthy blood, the utmost attention should be paid to the due performance of all the functions connected with the blood-forming and blood-purifying processes. The greatest care must be paid to secure for surgical patients fresh and pure air and light—purer than may be got along with in health—good wholesome food, clean linen and clothing, and proper government of the intellectual and general nature, and adaptation to the unaccustomed but necessary constraint. All these facts are generally conceded in theory, but practically often overlooked.

Then it must not be forgotten in estimating the results of surgical operations, that they are often much affected by circumstances inherent in the patients themselves, for which the operation is in no way responsible.

In health, Dr. Parkes estimates that each inmate of a room should have three thousand cubic feet of fresh air per hour; but in disease more than this is needed. Patients should be almost deluged with fresh air. This, Paget says, is the only thing which can be called remedial for blood poisoning, which is the bane of surgery. Then, as to light, Hammond has said that the direct sunlight falling on wounds was good for them. This may be questioned when we think how rapidly healing goes on under dressings which exclude all light. Yet wards should have a good light. The diet of surgical cases may often be varied from the strict regimen of the hospital, with advantage to the patient. The mental impressions of the patient often determine the issue of his case, and an accident which cuts a man off from his work and demands an operation may be followed by death where a similar operation for chronic disease would not.

The results of operations are influenced by peculiarities of each patient's constitution, mental and physical, and by the hygienic conditions existing before, during, and after the operation. Paget lays great stress upon this fact, and cites examples of the unexpected results which followed, overlooking special conditions of the patient.

Shock, one of the most common causes of death after primary amputations for injury, owes its malignant potency in such cases to the fact that the system has not fully recovered from the previous shock of the injury. The desideratum is to prolong the duration of the *primary* or *apyretic* period, so as to secure a complete subsidence of the original shock before operating. It is probable that this may be effected by carbolizing the injured tissues according to the method of Stephen Smith, which appears to prevent inflammation, and thus to retard, or even abolish, the "intermediary" period of wounds. Again, the application of heat may be of value during the stage of waiting for reaction from primary shock.

Septic complications have heretofore been, and often are still, the most fruitful causes of mortality after operations in hospitals, where their malignant effects are observed after secondary, as well as after primary, amputations. Much may be done to prevent the development of septic poison by careful and untiring attention to sanitary precautions, including all the details of personal and hospital hygiene. Mr. Savory says the secret of success lies in scrupulous cleanliness, antiseptics of some kind, rest—disturb the wound as little as possible, cleanliness in its surgical sense, and rest in its physiological sense. Above all, plenty of fresh air.

In the Pennsylvania Hospital, from 1875 to 1879, there were 108 amputations upon 100 patients. Of these only 17 died, and five of these died within thirty-six hours from recurring or continued shock—not one died of septic disease. This was attributed to the pure air of the hospital, cleanliness, and attention to hygienic details.

In Vienna, the great mortality in the lying-in wards was found to be confined to those parts in which medical students, who engaged in dissections and *post-mortem* examinations, attended, while that where midwives were trained—who did not engage in such unsanitary work—was much more fortunate.

Dr. Cabell said he had tried to collect statistics of private amputations, especially along the railroad lines, where there are many primary operations. He got reports of 686 cases, with 100 deaths, 14½ *per cent.* There were—

Primary Amputations		Died.	Per cent.
Of the thigh, . . .	171	34	20
Of the leg, ...	273	38	14¼
Of the arm and shoulder, .	142	21	14½
Of the forearm, . . .	100	7	7

The statistics of amputations in private practice and in cottage hospitals, in rural districts, when compared with those of city hospitals of the usual capacity, due allowance being made for various other influences that determine the results of operations, do not warrant the sweeping conclusion that large hospitals, even those constructed on the block system, with several stories, are *necessarily* liable to outbreaks of septic disease, or that the mortality must necessarily be greater than in private practice, in the same localities, and among the same classes of the population. Cottage hospitals usually have a better class of patients than large general hospitals, and usually they do not have the same "intensity of experience," as it has been well called.

The observed sanitary defects of any given hospital will almost certainly be found to be due to faulty *location*, faulty plan of *construction*, or to remediable defects of administration. Septic diseases are indeed likely to arise in a ward, whether of a large or small hospital,

in which a number of surgical cases with open wounds are brought into proximity with each other, *but if overcrowding* be prevented, it is possible to prevent the spread of these diseases by adequate ventilation and perfect cleanliness in its most comprehensive surgical sense.

After securing all that can be accomplished by patient and scrupulous attention to sanitary arrangements, with a view to render the atmosphere of a hospital comparatively aseptic, there can be no absolute exclusion of septic germs, and therefore there is good reason to believe that an additional protection may be derived from the use of antiseptic precautions practised in conformity with the Listerian principle.

"Listerism," practised *de rigeur*, while not so essential in cases of amputation, where it may often be superseded by drainage and perfect cleanliness, has achieved results in operations on joints and in treatment of "abscesses by congestion," which have not been paralleled by any other system of treatment.

Of this, the spray is the least important part. All the world has been told, in varying degrees of sensationalism, that Keith announced at the International Medical Congress, in London, last year, that he had abandoned the use of the spray. But this, Lister himself held to be the least important part of his method. The statistics of Spencer Wells, of Goodell, of Homans, go to show the advantage which has accrued from the use of Lister's method.

Yet, on the other hand, Mr. Lawson Tait reports in 100 cases of abdominal surgery a mortality of only 8.1 *per cent.*; and yet he does not use the Lister method. Dr. Walter F. Atlee, of Philadelphia, has never lost a patient after ovariotomy, and he uses no Listerism. Dr. John L. Atlee, of Lancaster, Pennsylvania, has had great success in this operation, and he does not employ Lister's method.

Such facts have great weight, and show that the highest success has been attained without the precautions of Lister. Nevertheless, the preponderance of evidence is in favor of its utility in ovariotomy and abdominal sections generally, although marvellously good results have been obtained without special antiseptics, by a careful attention to other sanitary arrangements.

In the discussion which followed, the main topics of the paper were passed by, and the attention of the Association was limited to the opinions expressed in regard to the antiseptic method of Lister.

DR. D. W. YANDELL, of Louisville, Ky., said that since the Congress alluded to by his learned friend, he believed Mr. Keith had added forty, perhaps fifty, other cases—all successful—to the list done without Listerism. Among them have been some very heavy cases, and a few of them the "heaviest" possible cases. Keith had abandoned Listerism altogether in ovariotomy for reasons already known to the Fellows, but he still resorts to it in much of the general surgery he does, not having lost faith in it in this class of cases. The three things Keith insists on as essential are care, cleanliness, and complete drainage, and these in abdominal sections, at least, make antiseptics unnecessary. Lawson Tait has never used antiseptics—has, in fact, uniformly denied their usefulness, asserting that the trio of Mr. Keith fulfils all needed requirements. And yet Mr. Tait presents an array of cases of abdominal section done without antiseptics in any shape or form, which is not only very large, but in which the percentage of recoveries has never been exceeded by any follower of Mr. Lister.

DR. BEVERLY R. COLE, of California, said that it is very hard for a writer to escape the influence of preconceived opinions, and the paper just read was an illustration of that fact. The writer did not, of course, intend to be unfair, and he himself would probably fall into the same error if he were to write upon the subject. Lister himself said he had never considered the method suited to ovariotomy, and had tried to dissuade Keith from employing it. It was anticipated that Listerism would prove of great assistance to ovariotomy—"But *has* it?" Bantock, Gamgee, Humphrey, and many others are unequivocally opposed to it. Of fifteen who debated this subject in the International Medical Congress, if my memory serves me rightly, only two, Thornton and Spencer Wells, expressed themselves positively in support of it. Even Sims, who had formerly believed in it, was no longer the devoted supporter of it that he was.

DR. HENRY F. CAMPBELL, of Augusta, Georgia, said, perhaps because he was such an old man he could not take up with the method of Listerism. He had got along so well without it for forty years that he could not adopt it now. Then he did not believe in the theory. Why, how could you apply it to lithotomy? Here is a case in which you cut into the bladder, take out a stone, put your patient in bed, and let the wound alone. How do the micrococci affect this? After having done this operation sixty or seventy times, he could say that he had never had a metastatic abscess nor any traumatic fever.

DR. J. W. S. GOULEY, of New York, said he had always been *anti*-Lister. He never treated any wound by Listerism. Lister attacks the micrococci locally. but his plan does not get at those in the blood and lymphatic channels. We are all antiseptists, but not Listerists. For more than twenty years he had treated wounds with dilute alcohol. We all give quinia. What is that but a parasiticide? The same may be said of the tincture of the chloride of iron. Another thing: statistics are not reliable; I know a gentleman who reports hospital cases as successful when they are not successful at all. It is so hard to escape the influence of preconception. As to Listerism, my belief is that it will soon be dead—that it is now dead!

DR. R. A. KINLOCH, of Charleston, S. C., said he was surprised at a misunderstanding in regard to Lister's method, which had been several times repeated in the discussion. He had been spoken of as one who closed wounds, whereas drainage is an indispensable part of his method. In his method of procedure, the spray seemed to be all that was objected to. It had already been remarked that Mr. Lister considered this the least important part of his method. And yet supposing it was indispensable; the opponents of Mr. Lister say it does no good—does it do any harm? Are the results of surgical operations worse than before its adoption? He himself did not believe in the sentiment uttered, that Listerism was dead, but that it is alive, and will continue to accomplish great successes in surgery, and reflect honor upon its originator.

At this point the meeting was adjourned, after a motion had been adopted that the discussion be made the first order for the next day's meeting.

SECOND DAY.—JUNE 1ST.

The discussion of Dr. Cabell's paper was resumed.

DR. GAY, of Boston, said that he had had ten years' experience in one of the largest hospitals in Boston, a hospital in which from 1600 to 1700 in-patients are treated every year. In this he had the honor of introducing the Lister method, and he has used it there ever since. Outside of large hospitals, he did not think it can ever become very popular. It has been objected that it is too much trouble, but he thinks that this is a mistake, for all the extra trouble caused by the first dressing is made up for by the infrequency of the subsequent dressings. After the use of this method for five years, and comparing it with others used in the same wards, he finds that there is nothing which checks suppu-

ration and bad odor so quickly. In major operations he finds less suppuration after the use of Lister's method than when it is omitted. In the treatment of large abscesses, such as the psoas and iliac, nothing has ever attained such good results. Listerism has proved itself completely, and only the every-day working surgeon can properly appreciate it. The advantage of it in ovariotomy is proved.

DR. D. W. YANDELL, of Louisville, said the success of Listerism did not prove so much as was claimed, for there could be opposed to it equal success by other methods. Take, for example, the success of Mr. Lawson Tait, already referred to. It has been claimed that without Listerism we would have never been able to open joints as we now do. This proves nothing. Without Otis's extraordinary treatment of the urethra, to which I am strongly opposed, we probably would not now have Bigelow's method of lithotrity. But that don't convince me of the value of such a method as that of Otis.

It is not safe to reach conclusions on the word of authors; experience must decide. He himself had done his first five cases of ovariotomy without the spray and all got well; he did his last eight without the spray and seven got well. Between these two series he had done as many as fourteen or fifteen *with* the spray, and a number of them died. They did not die because of the spray any more than the others got well because the spray was not used.

Another thing to be remembered is that every man's greatest successes have been in his last cases, and all his great disasters in his earliest. In deciding the value of this method we must work and wait patiently with the tolerance and humility which belong to true science. Then we shall find out whether Listerism is of great value in itself, or whether its apparent advantages are due to the cleanliness and care it makes necessary.

DR. E. M. MOORE, of Rochester, said he would go further than Dr. Yandell with reference to the spray; he would say that he believed the cases of his that died when the spray was used, died because of the spray. Some years ago he had thought that the solutions of carbolic acid used were too weak to do much good, and then the idea had come into his head that the spray might, instead of eliminating germs, collect them; that the general rush of the air might collect them. So he made an experiment. He got a sheet of plate-glass, cleaned it thoroughly, played upon it with a spray from an atomizer, and then examined it with a lens, and found that there was not a quarter of an inch of the surface on which there was not a mote collected from the atmosphere by the spray and deposited there. He said then he considered the spray one of the most ingenious apparatus ever devised for spoiling a peritoneum.

DR. BEVERLY COLE denied that Lister's method had led to the confidence in operating upon joints which had been claimed as one of its merits. He and Dr. Cooper had opened knee-joints freely twenty or more years ago.

DR. GOULEY had also opened knee and other joints without Listerism, and had no disagreeable reaction, no suppuration.

THE PRESIDENT, Dr. Gross, then announced the Committee on Nominations, as follows: Drs. Cabell, Mastin, Yandell, Davis, Norris.

DR. MOSES GUNN, Professor of Surgery in Rush Medical College, Chicago, Illinois, then read a paper on the

TREATMENT OF FRACTURES OF THE SKULL, RECENT AND CHRONIC, WITH DEPRESSION.

He called attention to the general sentiment of the profession, since the days of Abernethy and Cooper, against interference in cases of fracture unless symptoms of brain irritation or compression are urgent. In this, American and English surgeons were agreed. Gross seemed to go the farthest in the direction of interference where there is depression, not postponing it as long as most authors advise. The question now arises: are we not too conservative in our treatment of simple fractures of the skull, with depression and without symptoms? He believed the answer to this should be, yes. His belief was that in all recent fractures with depression, whether simple or compound, even though entirely without symptoms of compression, if there is reason to believe that the internal table is depressed, and if there are no symptoms of marked concussion or collapse, elevation of the depression should be promptly effected. In fractures from external force, injury is apt to be more severe to the inner plate of the skull than to the outer; and even when this does not occur and constitute an immediate danger, there is the possibility of the formation of osteophytes and spiculæ of bone, which at a later period will be a source of danger to the patient. The danger of interference having been reduced nearly to zero by antiseptic methods, we are warranted in operating where formerly we would not have been.

He then spoke a word for the much-abused trephine. Statistics of bad results after trephining, in order to show that this was the cause of them, should be able to show that there was no irritation or inflammation before it was used. If the dura mater has not been injured already, it will not be by the trephine: no careful surgeon would do this. In chronic cases, *as soon as positive*, even though comparatively *slight*, symptoms of cerebral irritation present themselves, a disk of the cranial walls, intended to include the irritating point, should be removed with a trephine of requisite size, which should include the whole depression, or at least the most depressed portion of it. Subsequent irritation is often due to the formation of osteophytes, and he believed that the cases successfully treated would be found to be those in which early interference has been made. All operations and dressings should be conducted upon strict antiseptic principles.

DR. R. J. LEVIS said, it is a surgical axiom that the amount of depression should have more influence with the surgeon than the absence of symptoms. The symptoms of shock usually mask the signs of compression. Most of the patients brought into the Pennsylvania Hospital present symptoms of concussion, and if we were to wait for signs of compression before operating, we would often be too late. At this hospital we usually trephine where there is depression, and we cannot be governed by the symptoms of compression.

DR. MOORE asked the question, How are we to know when there is internal pressure, unless we have symptoms?

DR. GUNN replied that when, in a compound fracture, the external plate is broken and depressed, we can assume that the internal plate is more so. You say, "If, in a case of simple fracture, you have reason to believe the internal table is depressed, we should elevate." Now, if I find fracture and depression in the outer plate, not over the position of a venous sinus, I believe that it is right to elevate or trephine.

DR. E. M. MOORE thought the English position on this subject too conservative, and a reaction was taking place. He did not think that the trephine ought to do harm to the dura mater; a careful surgeon will not let this happen. But the vessels of the diploë must be torn most fiercely; this is inseparable from the use of a saw. His preference is to elevate and carefully pick out fragments. In this connection he spoke of his plan of treating scalp wounds by braiding the hair, and not using sutures.

DR. HUNTER MCGUIRE, of Richmond, said that the statistics of this operation are better for American than for English surgery. This is partly due to the fact that the former include those of the Peninsular and Crimean wars when different missiles were used, and partly because American surgeons interfere more promptly. There are many cases where there may be some danger to life if an operation be done; but where, if it be neglected, the risks of subsequent brain injury are so great that it is a question whether the patient's life is worth saving. But to express an opinion in favor of operating in every simple depressed fracture of the skull would be to give a license to every young surgeon to use the trephine. If a fracture is simple, and the amount of depression not enough to bring on symptoms of compression, the surgeon had better let it alone, and trust to the brain accommodating itself to the change. He thought that for the Association to send out with its endorsement such opinions of one of its most prominent Fellows as are expressed in the paper just read, would be most dangerous.

DR. J. W. S. GOULEY, of New York, narrated a case where he removed a small disk of bone from a man who had a punctured fracture of the skull, caused by a blow on the head with a gun, the hammer striking him first. There were symptoms of compression, and he trephined, and found under the point of fracture a hæmorrhage. He believed that, wherever there is reason to believe that the internal table is depressed, it is not a bad plan, but a good one, to remove a piece of bone. He also narrated a case of a miner who had a blow with a piece of coal, and from whose skull, when he was brought to him in New York, he removed a disk of bone, finding under it seven or eight fragments pressing upon the dura matter. Two weeks later the bone, for nearly an inch around the position of the disk, was found to be hard and white, and in six weeks he removed a sequestrum. He referred to Dr. Lidell having some time ago advanced the idea that when a spent ball struck the skull, it would cause the death of a part of it without any fracture. In another case he related, he refrained from operating upon a policeman who was able to express an opinion and declined to be trephined. This man is alive to-day, but he is insane, and has been ever since that time.

DR. WILLIAM T. BRIGGS, of Nashville, Tenn., said that he had never regretted the use of the trephine, but had often regretted that he had not used it. He thought it was the proper operation for the prevention of the secondary effects which often follow head injuries. Of these he had seen over one hundred cases, possibly, where no operation had been done. He has seen twenty-eight cases of epilepsy, and two of insanity. There are two classes of these injuries. In one there is a diffused injury of the brain, as in cases caused by a fall. In the other there is no injury of the brain, or only a local injury. He did not believe the operation would be demanded if the fragments remained fixed and stationary. The brain will accommodate itself wonderfully to such a condition. He had seen recently a case in perfect health with a depression so large that he could turn an egg around in it.

He thought the trephine should not be used for depression alone, but where there are spiculæ, for these may set up immediate or later irritation. A short time ago he had seen a boy with a fracture of the parietal bone, without any evidence of depression; no operation was done. Soon after there came on curious spasmodic movements of the left hand, and more or less of the whole left side. He then trephined and found a fissured fracture of the internal plate, the edge of which was turned directly in against the brain. In all such cases there will be found symptoms of irritation.

The operation of trephining he considered one of the safest of capital operations. Another case in which trephining is called for is where there has been bruising of diploic structure, without fracture of the inner table, in order to allow of the discharge of pus and other discharges. As to treatment after trephining, he would not close the wound, but just let the flap down, so as not to interfere with the discharges.

DR. R. A. KINLOCH, of Charleston, S. C., referred to the wide range the discussion had taken. He endorsed the old rule that where there is but moderate depression, without symptoms of compression, the fracture should be let alone. Any attempt to elevate only increases the risk. The presumption that the patient is going to suffer from after-effects is not justified by statistics. Sometimes, even after removing a piece of bone, you find the bad symptoms continue, showing that they were due to a deeper injury. Exploratory incisions add to the risks of the patient. Where there is only depression of the external plate, it is in the best condition if let alone.

DR. S. W. GROSS said that he could fully endorse Dr. Gunn's conclusions as to chronic cases of fracture, but in regard to recent ones he preferred the following modification: That in all recent fractures with depression, if the latter be moderate, whether simple or compound, the patient should be left alone. If, however, fixed and severe pain at the point of injury, febrile excitement, increase of local temperature, and a commencing puffiness of the scalp supervene within a few days after the accident—signs which are indicative of depression of the internal table and the development of pachymeningitis—elevation of the depression should be promptly effected. In all recent fractures, whether simple or compound, attended with symptoms of compression, the trephine should be resorted to; and the same rule should apply, whether symptoms be present or not, if the depression be considerable and funnel-shaped. Punctured fractures should invariably be subjected to operation.

DR. D. W. YANDELL said he thought an operation should only be undertaken if the symptoms of irritation persist. We all know how fleeting these sometimes are. Age also affects the prognosis. An injury which would not signify to a child might be very dangerous to an adult. The old rule is not a bad one, and probably cannot be improved upon.

DR. GUNN, in concluding the discussion, said his opinions in regard to compound and punctured fractures did not differ from those ordinarily entertained. In regard to simple fractures, he had taken but a step in advance of the principles laid down by the distinguished President of the Association.

DR. R. J. LEVIS, of Philadelphia, then read a paper on

THE TREATMENT OF TRANSVERSE FRACTURE OF THE PATELLA, WITH THE OBJECT OF PRODUCING BONY UNION.

He first called attention to the fact that, the patella not being a symmetrical bone, it was hard to make any well-fitting appliance to it. Then again, as it has no natural depressions to which to apply force, the application of such force creates unnatural depressions. Thus pressure upon the angular edges above and below tends to cant the fragment upwards, and, even if it could bring the lower edges of the fracture together, it would separate the upper edges. The result of ligamentous union is apt to be lameness, inability to use, and mistrust of, the injured leg. Bony union is very rare. It has been doubted if it ever occurs. With the ordinary apparatus he did not believe it could be secured. But he and Dr. Morton had for some years been using a modification of Malgaigne's hooks, with which he believed he had secured it. His own modification consisted in separating the hooks of one side

from those of the other, so that they can be inserted first on one side of the fragments and then on the other. He then showed two patients who had been treated in this way, in whom no motion could be made between the former fragments, and who had complete use of and confidence in their legs.

LENGTHENING OF THE FEMUR AFTER SECTION.

DR. E. M. MOORE then showed a specimen of the pelvis and both thighs of a case in which he had operated for the correction of deformity, two years after a dislocation of the head of the femur on the dorsum of the ilium. He did a sort of subcutaneous osteotomy, dividing the neck of the femur; after which he extended the thigh by weights. The bone united, with a gain of an inch and a half in length. Much new bone material was thrown out. The patient died some time after recovery, and he secured the specimen exhibited. This showed the head of the bone to be surrounded with an open, coral-like mass of osteophytes and the shaft united to the neck by the interposition of an inch and a half of new bone. This, he said, was very interesting, in view of the modern theory that no bone will form except under periosteum; for here there could not have been any. It is impossible to conceive of the periosteum stretching across the gap of an inch and a half which he had made.

(To be continued.)

MEDICAL SOCIETY OF NEW JERSEY.

One Hundred and Sixteenth Annual Session, held at Asbury Park, May 23 and 24, 1882.

(Specially reported for THE MEDICAL NEWS.)

THIS Society held its one hundred and sixteenth anniversary in Education Hall, Asbury Park, on Tuesday and Wednesday, May 23 and 24. Nearly all the district societies were well represented.

The PRESIDENT, DR. L. W. OAKLEY, called the meeting to order, and introduced Rev. B. C. Lippincott, who offered prayer.

DR. S. H. HUNT, in behalf of the Committee on Arrangements, extended a cordial welcome to the members to Asbury Park.

THE NEW YORK CODE.

DR. VARICK asked to have the order of business suspended, for the purpose of introducing the following:

Resolved, That the Medical Society of New Jersey reaffirms its allegiance to the Code of Ethics of the American Medical Association, and views with distrust any effort on the part of legally constituted societies to deviate from or antagonize its provisions.

Resolved, That the Medical Society of New Jersey declines to hold intercourse with any Society, State or otherwise, which in the slightest particular ignores its provisions, or by any act impairs its obligations.

These resolutions brought out a spirited discussion. The first resolution was passed unanimously; the latter was lost.

DR. D. C. ENGLISH then read a paper on the

PREVENTION AND LIMITATION OF EPIDEMICS.

After an historical review of epidemics in the middle ages, the writer spoke of the means at our own command for the limitation and prevention of epidemics. First, the education of the public in sanitary science through the public schools, and by general and State legislation, and by active State boards of health.

The State Board of Health of New Jersey had, in his opinion, effected sufficient legislation, and public opinion should be cultivated by the medical profession, who have during the last few years exhibited great interest in sanitary reform, led on by the recent investigations in the origin of disease. Upon them depends the keeping the public interested in keeping contagion away from public schools, and in adopting measures for isolation, and the proper means of sewerage of towns, and for pure sources of water-supply, enforcing vaccination, and all other measures calculated to prevent the spread of disease.

DR. A. P. POND, a delegate from the Medical Society of Massachusetts, being present, was formally invited to sit with the Society, and to take a part in its deliberations.

After the transaction of considerable routine business, the Society adjourned to meet at eight o'clock in the evening.

EVENING SESSION.

The Society reassembled at eight o'clock. The PRESIDENT, DR. OAKLEY, read

THE ANNUAL ADDRESS,

which was listended to with close attention. After paying a deserving tribute to his predecessors, both departed and living, he made an exhaustive argument, taking in the full scope of his topic, medical education.

THE REPORT OF THE STANDING COMMITTEE

was then read. It gave a succinct account of the medical history of the counties of the State received from the county reporters. All over the State the year's record shows a general increase of malarial diseases, often of severe form, approximating the condition known as typho-malarial, ascribed by many observers to the drought of last year, and to the condition of the well water. Typhoid was prevalent throughout the southern counties, while diphtheria and scarlet fever prevailed throughout the northern part of the State; of a mild type however. Small-pox was reported in Hudson, Essex, Mercer, and Passaic counties.

INTERESTING CASES.

DRS. HUNT and SNOWDEN reported several cases of *Diphtheria*, which have a bearing on the period of incubation of that disease. In these instances the new cases showed the symptoms of the disease in from five to seven days.

DR. LARISON reported a *Case of Diabetes*, very much benefited by one-half grain doses of opium three times daily, conjoined with the usual dietetic treatment.

DR. GRAY reported a case of *Hydatid Disease of the Uterus*.

The following essays were presented with the report: DR. WELCH, on the *Treatment of Uterine Hæmorrhage;* DR. ST. JOHN, on the *Diagnosis of Infantile Diseases;* DR. CURRIE, on *How to Choose a Wet Nurse*.

A circular was issued by the committee, requesting information regarding the *New Medical Law* and its effects. No convictions have occurred, although it is notorious that irregulars are practising in all parts of the State in open violation of the law.

The formation of a New Jersey Society for the relief of the widows and orphans of medical men, was noted with approval.

The *Necrology* of the year embraces the names of Dr. Wilmarth, of Essex County; Dr. Marcy, of Cape May County; Drs. Clew and Morrogh, of Middlesex County; Dr. Harris, of Warren County; Dr. Dickerson of Salem County, and Dr. Studdiford, of Hunterdon County.

SECOND DAY.—WEDNESDAY, MAY 25TH.

DR. RYAN read the following, which was adopted by this Society:

FELLOW'S PRIZE.

Doctor Oakley having suggested to the Fellows the propriety of offering a prize annually for the best essay

on a given subject, that body met during a recess, adopted the suggestion, and appointed Thos. Ryerson, S. H. Pennington, and E. M. Hunt to prepare a plan, and report it to the Society at its present session. The following plan was accordingly presented to and unanimously adopted by the Society.

The Fellows of the Medical Society of New Jersey, present at Asbury Park during the meeting there of the Society, hereby propose that the Society shall offer, annually (or at least bi-annually), a prize of one hundred dollars to the members of the several district societies of the State, for the best essay on some selected subject connected with medical science or art; and that they will deposit annually (or at least bi-annually) with the Society's treasurer, the funds necessary for that purpose.

The method of competition for and of awarding that prize shall be as follows:—

A committee of three shall be annually constituted, to be called the *Fellows' Prize Committee*. The retiring president of the society shall, *ex officio*, be its chairman, a Fellow selected by his associates shall be the second member, and the third shall be a member of a District Society (not a Fellow of the State Society) selected annually by this Society's Nominating Committee.

At the session of the society when this committee shall be constituted, it shall select and announce to the society, and promptly thereafter to each district society, a subject for the competition of the ensuing year. And during its year of office, the committee shall adjudicate upon the essays which shall have been handed in to its prospective chairman (then the president of the State Society) not less than two months before the session when it was constituted.

Each essay shall be signed under an assumed name, and have a motto, both of which shall be endorsed upon a sealed envelope, containing the author's real name with his address and district society; and none of these envelopes shall be opened by the committee until after its award, and then only those bearing the mottoes and names appended to the successful essays. The committee shall select the first two essays in order of merit, reference being had not only to the subject-matter, but to the language and style of the author. To the first essay shall be awarded the prize of one hundred dollars, to the second that of "honorable mention." They shall give to the President of the Society the names of the authors of these essays, with their assumed names and mottoes, and notify these authors to be present at the next annual meeting to receive their award. The president shall during that session announce these names, assumed names, and mottoes, and before the whole society, with some appropriate ceremony, make the awards. The unsuccessful authors having identified their essays, shall receive them back from the chairman; but the successful essays shall be the property of the society and be published in its "transactions."

No award shall be made, unless the essay shall be decidedly meritorious; and in that case, the money shall remain in the treasury, until it can be thus properly awarded,

The Fellows have themselves this year selected the following subject for competition: "The importance of exploration of the urine, both chemical and microscopic, as an aid to practice; and the relation of hæmaturia to diseased processes."

The Committee of Award for the essays (to be handed in two months before the next annual meeting) is L. W. Oakley, of Elizabeth, chairman *ex officio;* Henry R. Baldwin, of New Brunswick; and James S. Green, of Elizabeth.

The following report was read and adopted of the Committee on the

COMPARATIVE VALUE OF HUMANIZED AND BOVINE VIRUS.

The Committee appointed to report upon the comparative value of humanized and bovine vaccine virus, and the best security of their purity, respectfully submit that they have received communications from the reporter of only one district medical society, Dr. Snowden, of the Camden District Society, and that the question was discussed at one of the meetings of the Mercer District Medical Society. Dr. Snowden writes that he had endeavored to obtain the opinion of each member of the Camden District Society, and that three-fourths of those from whom he had received replies preferred humanized virus. Most of these gentlemen are residents of the city of Camden, where a severe epidemic of variola prevailed more than a year ago. He writes that the objections to bovine virus are its want of reliability, and the irregularity of the results obtained.

At the discussion at the meeting of the Mercer District Medical Society, there was a pretty general agreement as to the want of reliability of bovine virus, and the irregularity in the development of the vaccine disease resulting from it.

Your Committee have very little to add. In their own experience they have had a large percentage of failure in the use of bovine virus in primary vaccinations, the operation having to be repeated once, twice, or oftener. The period of development they have found to be by no means uniform, and the local and constitutional effects have often been severe and troublesome. They prefer well selected, humanized vaccine; but, on the outbreak of an epidemic of variola, they recognize the necessity of recourse to bovine virus, and the renewal of stocks of humanized vaccine requires occasional resort to it.

The only security now existing for the purity of bovine virus is the prevailing standard of commercial morality, a very unsatisfactory ground of security. Your committee are of opinion that the establishment of a vaccine farm under the direction of the State Board of Health would afford a better and more reasonable security for purity and reliability of supply of bovine virus, and that the organization of a State vaccine establishment might prove to be a wise expenditure of public money.

Communications from several district medical societies were referred to the Judicial Committe.

THE DEGREE OF DOCTOR OF MEDICINE

was conferred upon Charles A. Schuhl, of Newark, and Vincent Nager, of Jersey City.

VICE-PRESIDENT BARKER gave a very exhaustive essay on

THE VACCINATION QUESTION.

Interesting discussion followed by Drs. E. M. Hunt, Van Wagner, Gordon, Hopper, English, Rogers, Gaunt, and others.

DR. CHANDLER. of Essex, read a paper on

NERVE STRETCHING.

He gave a history of the operation, and a detailed account of the lesions caused by the operation; also the results of the operation in neuralgias, spasmodic affections, tetanus, locomotor ataxia, etc.

Accompanying the paper was a table of three hundred and twenty cases, giving the operator's name, the disease, date of operation, result, and remarks.

The operation causes an extravasation of blood in the sheath, partial separation of the nerve from its sheath, rupture of a portion of the nerve fibres, and occasionally nutrition changes. It affects the sensitive fibres more than the motor. The motor fibres are

more affected by centripetal traction. The nerve centres suffer certain dynamic changes, and there are occasional local disturbances. The best results have been in sciatica. 57 cases are reported, with 91 per cent. of cures. Of mimic spasm, 13 cases were reported, of which 11 were cured. Of traumatic tetanus, 49 cases, with 20 per cent. recoveries. Locomotor ataxia, 49 cases, with 32 per cent. very much improved. Besides many other diseases of the peripheral nerves.

In speaking of the unfavorable impression created by the recent discussion in the Berlin Society, the author took exception to the objections made, and cited the early experience of ovariotomists, and ended a very interesting paper by the following conclusions: That the operation has been successful in so many cases that its position as an accredited operation will be assured when we have acquired the data necessary for a clear determination of its indications.

DR. ILL, of Newark, read a paper on

LACERATION OF THE CERVIX,

and the results of the operation for its cure in 44 cases. Of these, 39 were cured of the lesion, and 37 of the accompanying symptoms. The writer called special attention to the loss of sexual appetite following the lesion, and its restoration by the operation. The symptom was found present in 34 cases, and was relieved in 27. One of the cases became pregnant, and on delivery was again torn, with a return of the symptoms; the laceration was, however, not in the cicatrix of the operation. The author commends the operation, and regards it as one of the most interesting and useful in uterine surgery.

DR. C. J. KIPP read a paper by title, the subject of which was *Traumatic Rupture of the Anus.*

OFFICERS FOR THE ENSUING YEAR.

THE NOMINATING COMMITTEE reported as follows:

For *President*, JOHN W. SNOWDEN, M.D. *Vice-Presidents*, Stephen Wickes, M.D.; P. C. Barker, M.D.; and Joseph Parrish, M.D. *Corresponding Secretary*, Dr. Wm. Elmer, Jr., of Trenton. *Recording Secretary*, Dr. Wm. Pierson, Jr., of Orange. *Treasurer*, Dr. W. W. L. Phillips, of Trenton. *Standing Committee*, Drs. C. J. Kipp, S. S. Clark, and E. J. Marsh.

The report was accepted, and the nominees duly elected.

MISCELLANEOUS BUSINESS.

Drs. Pennington, Rogers, and Elmer were appointed a committee to elaborate a plan for the putting into effect the suggestions made by the President in his Address in regard to the curriculum of medical study.

Drs. H. H. James, L. Hulsey, W. Rankin, D. W. Currie, and H. C. Clark were appointed a committee to investigate where and of whom good and reliable vaccine virus may be obtained.

THE CODE OF ETHICS.

The following, offered by DR. PENNINGTON, was adopted:

Resolved, That the delegates from this Society to the American Medical Association be instructed to resist any effort to alter the Code of Ethics in such manner as to authorize members of the profession or any medical society in affiliation with the Association to encourage or permit its members to hold professional intercourse with men who repudiate the scientific principles of medical practice recognized by the said American Medical Association.

CONCLUDING BUSINESS.

It was voted that the next annual meeting shall be held at Atlantic City.

It was voted that the annual assessment shall be $1.50 per capita. Dr. George Bayles was appointed essayist for next meeting. Adjourned.

THE CONNECTICUT MEDICAL SOCIETY.

Ninety-first Annual Convention, held at New Haven, May 24 and 25, 1882.

(Specially reported for THE MEDICAL NEWS.)

WEDNESDAY, MAY 24TH. The Convention met at the City Hall, New Haven, and was called to order promptly at three o'clock by the President, who addressed the Fellows, welcoming them, and suggesting such topics as in his judgment required attention. There were two principal points to which he called attention. In his opinion the time had come for the Society to take a more aggressive policy, and to demand from the State a recognition of their rights. A law should be enacted requiring the diploma of a regularly chartered medical college as a requisite for commencing practice in this State. Such laws were in force on the continent of Europe, and should be here. The development of the Society was portrayed, and its influence described in glowing terms. The Code of Ethics seemed to him to be not needed in a body of intelligent gentlemen, who would live up to its principles if no Code were in existence; while those that wished to violate its principles would do so in spite of all regulations. The spirit of the Code is that which would direct any gentleman in his professional relations; but the existence of a detailed Code implies that we are kept in right paths only because we are compelled by fear of penalties, and not because we are governed by principles of right. If not abolished, the Code should be revised, and he advised urgently that provision be made for such action by the convention.

The Secretary read a communication from one of the Fellows detained by an accident from attendance in person; this covered about the same ground as the first recommendation in the President's address.

On motion, everything relating to the subject of a law regulating medical practice was referred to

THE BUSINESS COMMITTEE,

which subsequently reported that it was not yet expedient to endeavor to secure such a law as the President outlined. The army of irregulars in this State, the birthplace of Thomsonianism and other irregular forms of practice, rendered progress necessarily slow. We had now an excellent law relating to itinerants; let that become firmly established, when other provisions can be added. The ill success of repeated efforts, with no progress, made from year to year, discouraged precipitate action. Yet it seemed that the time was not far distant when some measures beneficial to rational medicine could be secured. The report of the Committee was accepted, and the committee discharged.

LUNACY COMMISSION.

The original resolutions offered in 1879, in favor of the appointment by the Governor of a lunacy commission, together with the report of a special committee in 1880, and the reports of the majority and minority of the committee of 1881, were referred to the Committee on Unfinished Business, which reported that in their judgment everything aimed at by such a commission could be performed by the Board of State Charities, in fact, a large part of the duties were specifically assigned to such a board. The law relating to the subject was read by the Secretary, and it was evident that this body had power to correct all abuses in lunatic asylums, public or private, and to guard individual rights.

The principal argument in favor of a lunacy commission was made by DR. CLEVELAND, of Middletown. He condemned the settled policy of evasion adopted, he thought deliberately, by the Society, and his own appointment on a committee with two superintendents of insane

asylums, to report on the desirability of a commission, one of the duties of which would be to investigate their own acts. He read the original resolutions to the effect that the Society should use its influence to secure the appointment of a lunacy commission with the usual duties of such bodies, and he inquired whether hospitals for the insane should not be managed as other hospitals are, and that the certificate of two physicians instead of one, as now, should be required for commitment to a lunatic asylum. The clause relating to the management of insane asylums in the same manner as other hospitals, on mature investigation, he had abandoned as impracticable. He urged the need of investigating the present management of asylums to correct abuses, and to weed out incurable cases, so that room might be had for the treatment of recent cases while there was yet the best chance for a cure, which was generally allowed to be when insanity is first developed; and thus to prevent the constant additions to the life-long pensioners of the State, from those excluded from asylums until nearly if not all chances of cure are lost. Another important function of a commission would be to study the causes and prevention of insanity, as the State Board of Health does in regard to zymotic diseases—the latter has justified its reasons for existence, and so would a lunacy commission.

There was an active debate pro and con. The small size of the State, with but one State institution, and the expense of securing the whole time of three experts, were the strongest objections to a commission. The report of the committee, adverse to lunacy commissions, was adopted.

THE REPORT OF THE TREASURER

showed a deficiency in the tax laid last year in only one of the eight counties; seven had no arrears whatever. Practically, a working balance was in the treasury—that is, enough to go through the year without anticipating any of the next year's revenue. The resignation of so efficient an officer was received with regret, but his engagements rendered it peremptory.

HONORARY MEMBERS.

DR. PLINY EARLE, of Northampton, Mass., was elected an honorary member, and DR. J. S. BILLINGS, U.S.A., and DR. WM. MAXWELL, of New York, were proposed for election next year.

THE ANNUAL TAX

of two dollars was laid, and the Secretary authorized to print seven hundred copies of the Transactions.

THE NEW YORK CODE.

Resolutions were offered severely condemning the action of the New York Medical Society with regard to consultations, but they were laid upon the table after a brief discussion. The objection to action was that, after some rather severe quarrels, the Society has at length been for several years harmonious; that the discussion of these resolutions would lead to hard feelings, and recrimination was inevitable. The wisest course was to manage its own affairs and leave its neighbors alone. A committee of three, however, was appointed to report upon the suggestions of the President concerning a revision of the Code of Ethics.

THE NOMINATING COMMITTEE

reported the following officers for next year: *President*, Wm. G. Brownson, of New Canaan; *Vice-President*, E. B. Nye, of Middletown; *Treasurer*, E. P. Swasey, of New Britain; *Secretary*, C. W. Chamberlain, of Hartford.

SECOND DAY.—THURSDAY, MAY 25TH.

The Society was called to order at 9.30 A.M.

THE SECRETARY'S REPORT

showed a membership of 446; 31 new members, and 11 deaths—a net gain of 16, when removals were included.

THE PRESIDENT'S ADDRESS

was upon *Points in the Treatment of Phthisis*. He cited mainly the pathology of later French writers, that tubercle had a natural tendency to resorption. The treatment of the fever of invasion, of softening, and of resorption, was the main topic. The treatment recommended for the first was bromo-hydrate of quinia; and for the stage of resorption, salicylic acid or the salicylate of soda.

The President-elect then took the chair.

DR. WAINWRIGHT presented the

REPORT OF THE COMMITTEE ON MATTERS OF PROFESSIONAL INTEREST,

which was devoted mainly to small-pox and malaria. The hyposulphite treatment of the former was advocated at the request of an absent member. The varying reports of increase of phthisis in malarial regions, and its decrease in others; the prevalence of cerebro-spinal meningitis in many localities, almost epidemic, its obstinacy under the usual treatment, and the intractable nature of rheumatism, neuralgia, and scrofula in malarial districts were reported. Had malaria come to stay? was a very important question; and whether consumption was on the increase or no, equally so. He urged upon the county societies to choose active workers for the position of reporters, and outlined what could be accomplished by a little effort to secure the items of interest and value that are lost to sight and memory if unreported.

DR. WHITE related a *Case of Dentigerous Cyst*, where twenty-four teeth were found floating freely unattached.

DR. CHAMBERLAIN asked the coöperation of the Society on behalf of the State Board of Health in the conjoint study of the

CAUSE OF MALARIA,

inaugurated by the State Boards of Health of New York, Massachusetts, and Connecticut, and the National Board. Aid was also asked in the special work of the Board of Health of Connecticut in ascertaining facts relating to

SCHOOL HYGIENE,

and especially in regard to any evils resulting from our present educational methods and the surroundings of the scholars. Each physician was asked to report any cases where health had been disturbed by school life, and to make especial inquiries in the families of their patients during the year. The special items wanted would be furnished in form of questions, and record-books furnished to those that would use them.

DR. WHITE suggested the study of water-supply with relation to the prevalence of malaria. The substitution of brook water for that of wells was repeatedly synchronous with the development of malaria. Whether there was any connection, he did not attempt to say, but recommended the subject to the State Board of Health as one that should be investigated. He also spoke of the carelessness in cutting ice from polluted streams, and suggested the examination of the ice supply of cities and towns by a chemical and microscopical examination of any accompanying impurities in the melted product.

DR. CHAMBERLAIN stated that work was already under way with regard to the organic impurities in the water-supply of our cities and towns, with special reference to the causation of bad odors and tastes. However, the inquiry could readily be widened. The ice

investigation was a fruitful one, and provision would be made for it as soon as possible.

DR. SANBORN, of Portland, Maine, and DR. BROWNING, of Providence, R. I., were presented to the Convention by the President, and gave brief speeches on behalf of their respective Societies.

DR. PORTER read an essay on the

RECOGNITION OF DEATH.

After deprecating the alarm at the fear of being buried alive, which he stated was infinitesimal, he gave the various tests for proving death, and discussed suspended animation; and in course of his subject alluded to the difficulties in the way of detecting crime inherent in the antiquated "crowner's 'quest law." The medical examiner system was advocated, especially as our State Board of Health has drafted a similar law for this State to that of Massachusetts; he hoped that when presented to the legislature it would have the hearty support of the profession.

THE CORONER SYSTEM.

DR. HUBBARD moved that a committee of five be appointed to urge upon the legislature the abolishment of the coroner system, and the establishment of medical examiners. The resolution passed unanimously, and a committee was appointed.

A PROTEST

against the action of the New York State Medical Society was read by Dr. Black, in which he presented forcibly the usual arguments against consultations with irregulars, and stated that such consultations were like compounding a social felony

In accordance with the policy adopted the day before, no special action was taken on the paper, which followed the usual course.

PROF. LINDSLEY, of Yale Medical School, read a well-digested essay, condemning the

USE OF PROPRIETARY REMEDIES

as demoralizing to the physicians and inimical to public interests. It was a forcible review of the whole subject in all its relations. The preparations were semi-secret, changeable in composition, unreliable in regard to the alleged quantities of potent drugs. These ready-made remedies lessened the difference between the regular and the quack, and justly detracted from our reputation as scientific practitioners. The paper elicited a lively discussion, but was in general sustained.

The remaining essays were read by title. The Society then adjourned. The next annual meeting will be held at Hartford.

NEWS ITEMS.

WASHINGTON.

(*From our Special Correspondent.*)

LIBRARY OF SURGEON-GENERAL'S OFFICE, U. S. A.—The safety and welfare of this library has been seriously threatened within the past few days by the cutting down of its annual appropriation, in the U. S. Senate Committee on Appropriations, from $10,000 to $5,000. This appropriation constitutes a specific clause in the army appropriation bill, which has not yet been reported to the U. S. Senate, and Gen. Logan, of Illinois, seems to be especially interested in the matter. and has expressed himself in the Committee in favor of reducing the appropriation. Happily, a fuller explanation of the needs and requirements of the library has been given since the bill was prepared for action by the Senate, and it is understood that the original amount of $10,000, as asked for, will be recommended, if not at first, still at some period during the passage of the bill.

Yet this shows how closely such appropriations have to be watched, and how fully the necessities for them should be set forth, in this case by all of those interested, which certainly means the medical profession of the United States. The third volume of the Index Catalogue, to dysentery, is just being completed. The Index Medicus is settling down upon an established basis, with prospects of future success; and to stop these and cut off the supply of periodical literature necessary to preserve sets of journals, society reports, etc., would be to commit incalculable damage. To be sure, another year might restore the appropriation, and continue the former work, but the work could not be taken up immediately where dropped; the personnel of the office would be modified, and much time would be lost. In short, the profession must see to it that no such hazardous experiments are attempted.

The eventual outcome of the attempts to induce Congress to erect a new building for the National Library, and an independent one for the National Medical Library, remains to be seen. Each department of the Government is fostering a library for its own purposes, and some of them are very ambitious in their aims and objects. The intention of Mr. Spofford, as Librarian of the National Library, is that all of these libraries, shall ultimately be consolidated into one, and located in the same building, leaving a working library alone to each department. In urging this scheme, however, he is careful not to antagonize the present interests of any other library which may eventually come under his plan for the future, for he appreciates the necessity that they should all be allowed full opportunities for progression. How far a general library constructed in this way can meet the wants of the medical profession as is done under the present organization, is certainly a question in which the whole profession is interested, and in which they have a voice. At present medical men control the medical library just as those versed in law control the law library of Congress; and it would seem that it would take a vast corps of specially trained experts to act as assistant librarians in carrying out Mr. Spofford's plan, to say nothing, as in the instance of the medical library, of a librarian seeing the labor of the best years of his life pass from him into the hands of others.

MIDDLETOWN, N. Y.

(*From our Special Correspondent.*)

THE ORANGE COUNTY (N. Y.) MEDICAL SOCIETY AND THE NEW YORK CODE.—At the stated Annual Meeting of the Orange County Medical Society, held June 6, the new Code was repudiated by an unanimous vote. The belief was generally expressed that it is not the wish of the profession of the State that the old Code should be changed.

ROCHESTER, N. Y.

(*From our Special Correspondent.*)

MONROE COUNTY (N. Y.) MEDICAL SOCIETY AND THE NEW YORK CODE—At the annual meeting of the Monroe County Medical Society, held at Rochester, May 31, it was "*Resolved*, that it is the sense of this Society that the Code of Ethics should be repealed."

CANADA.

(*From our Special Correspondent.*)

DR. CAMPBELL, Dean of the Medical Faculty of McGill University, and the Nestor of the profession in

Canada, died in Edinburgh on the 29th ult., aged 72. He was born in Roseneath, and educated at the Universities of Edinburgh and Glasgow, and was graduated in arts from the former, and in medicine from the latter. He came to Montreal in 1833, and early took a prominent position. For over forty years he held the chair of surgery in McGill College, and has been Dean of the Faculty for the past twenty years. Though not one of the founders, he was one of the earliest professors in the Faculty of Medicine, and much of the success of the school may be attributed to his care and attention. He was the last of a group of old-country graduates, comprising Holmes, Stevenson, Robertson, Caldwell (who founded the medical school in 1824), with Hall, McCulloch, and Crawford. All of the present professors in the Faculty have been his pupils, and they, with every member of the profession in the city, feel that a sure guide, a trusty counsellor, and a firm friend has been removed.

THE ROYAL SOCIETY OF CANADA.—The Governor-General has founded a literary and scientific society with this title. The first meeting took place last week, in Ottawa. There are four sections, the membership in each being limited to twenty. A quarto volume of transactions will be published. In the biological section, Prof. Ramsay Wright, of Toronto University read an interesting paper with some new points on the development of the cestoid worms.

FRACTURE OF THE ASTRAGALUS.—At a recent meeting of the Medico-Chirurgical Society of Montreal, Dr. Shepherd, Demonstrator of Anatomy, McGill College, read a paper on a hitherto undescribed fracture of this bone, and exhibited three specimens, all of which were obtained from dissecting-room subjects. The portion fractured was the process external to the groove for the tendon of the flexor longus hallicis muscle, to which the posterior fasciculus of the external lateral ligament of the ankle-joint was attached. Dr. Shepherd thought that it was produced by extreme flexion of the ankle with a twist of the foot outwards, and was probably one of the lesions which occurred in severe sprain. He suggested that it might account for some of the cases of severe sprain which recovered with impaired movement of the joint. The union was fibrous. He was not able to produce the fracture experimentally. At a subsequent meeting, Dr. Shepherd showed a fourth specimen in which there was bony union. Unfortunately, there was no history in any of the cases.

UNIVERSITY OF PENNSYLVANIA. —At the preliminary election of candidates for the Central Committee of the Alumni of the University, the following 15 gentlemen received the highest number of votes in the medical department: Drs. J. F. Meigs, J. H. Packard, Edward Hartshorne, Caspar Wister, Samuel Ashhurst, John L. Atlee, I. Minis Hays, Albert H. Smith, J. J. Woodward, Wm. H. Van Buren, W. V. Keating, Caspar Morris, Traill Green, R. A. Cleeman, and Geo. C. Harlan.

The election will be held on Commencement Day, Thursday, June 15, at the Academy of Music, Philadelphia, and the polls will be open from 10 A. M. until 4 P. M.

Ten members are to be elected from each of the three departments of the University by the alumni voting in person. Every alumnus is entitled to vote, except members of the Board of Trustees, or other officers of government or instruction.

THE PUBLIC HEALTH.—For the *week ending May 27*, the following additional items are presented: There were 3 new cases of *small-pox* in Brooklyn, but no deaths; 6 deaths in Hudson Co., N. J.; 2 new cases in Buffalo; and 10 deaths in New Orleans. *Cerebro-spinal meningitis* caused 9 deaths in Buffalo; 2 in the District of Columbia; and 1 in Hudson Co., N. J. From *diphtheria*, there were 15 deaths in Brooklyn; and 3 each in Hudson Co., N. J., and Buffalo. From *scarlet fever*, 22 deaths in Brooklyn; 12 in Hudson Co., N. J., which is a considerable increase; 8 in Buffalo; 2 each in the District of Columbia and New Orleans; and 1 each in Davenport and Vicksburg. From *typhoid fever*, 5 deaths in New Orleans; 3 each in Hudson Co., N. J., and Buffalo; and 1 in Augusta, Ga. *Whooping-cough* caused 6 deaths in Brooklyn. From *measles*, there were 9 deaths in Brooklyn; and 2 each in Hudson Co., N. J., and Buffalo.

Consumption caused 37 deaths in Brooklyn; 12 in Buffalo; 16 in Hudson Co., N. J.; 8 in the District of Columbia; 14 in New Orleans; and 3 in Davenport. From *pneumonia*, there were 28 deaths in Brooklyn; 14 in Hudson Co., N. J.; 4 each in Buffalo and New Orleans; 5 in the District of Columbia; and 1 each in Augusta, Salt Lake City, and Shreveport.

For the *week ending June 3*, the following returns of prominent causes of death have been reported:

Small-pox.—There has been a marked diminution of the mortality from small-pox in Cincinnati, the deaths for the week being 38 against 57 and 51 in the two weeks preceding. There were 7 deaths in Philadelphia from this cause; 4 in New York City; 2 in Pittsburg, with 12 new cases; 1 in Detroit, and 2 new cases; and 1 in Memphis. There were 5 new cases in Louisville, and a total of 16 cases under treatment in the hospital, but no deaths occurred during the week.

Cerebro-spinal Meningitis.—There were 6 deaths from this disease in New York City; 2 each in Boston and Louisville; and 1 each in Indianapolis and Detroit.

Croup and Diphtheria.—New York City reports 15 deaths from croup; Philadelphia, 5; and Boston and Detroit each 2 deaths. From diphtheria there were 11 deaths in Boston and 20 new cases; 31 in New York City; 7 in Cincinnati; 2 in Detroit; and 1 in Indianapolis.

Scarlet Fever.—There were 24 new cases of this disease reported in Boston, but no deaths. In New York City there was a still further decline in the weekly mortality. The deaths were 40 against 61 and 48 in the two preceding weeks. This disease is reported prevalent in Cincinnati, the deaths amounting to 16, one less than the total mortality for the month of May. There were 8 deaths in Philadelphia, and 1 each in Providence, Louisville, and Detroit.

Typhoid Fever.—This disease caused 3 deaths in Boston; 3 in New York City; 15 in Philadelphia; 2 in Cincinnati; and 1 each in Providence, Louisville, and Indianapolis.

Measles and Whooping-cough.—Measles is more generally prevalent now than in the early part of the year. In New York City, Brooklyn, Philadelphia, and Cincinnati, the mortality indicates the existence of a very considerable number of cases, the disease usually not being very fatal. It is quite a common thing to find this disease prevailing among the children of immigrants now constantly arriving from Europe. There were 30 deaths in New York City; 9 each in Philadelphia and Cincinnati; and 1 each in Providence and Detroit. Whooping-cough caused 14 deaths in New York City; elsewhere the mortality is insignificant.

Consumption and Pneumonia.—There were 29 deaths from consumption in Boston; 106 in New York City; 52 in Philadelphia; 8 in Providence; 15 in Cincinnati; 13 in Louisville; 4 each in Wilmington, Del., Dayton, and Indianapolis; 3 in Nashville, and 2 in Detroit. From pneumonia, there were 17 deaths in Boston; 88 in New York City; 40 in Philadelphia; 3 each in Providence and Cincinnati; 4 in Detroit, and 2 each in Louisville and Nashville. The returns show a slight

decline in the mortality from consumption, and a more marked decrease in the weekly deaths from pneumonia. In both cases the mortality is still above the average for this season of the year.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending May 27, 1882, indicate that consumption, whooping-cough, intermittent fever, and chicken-pox have increased, and that diarrhœa has decreased, in area of prevalence.

Including reports by regular observers and by others, small-pox was reported present during the week ending May 27, and since, at 10 places, in all, as follows: at White Cloud (three cases), May 22; at Buena Vista (two cases), in Port Huron township (one case), at Grand Rapids, at Manistee, at Cadillae (two cases), and at Flint (one new case), May 27; at Detroit (four new cases), May 30; at Kalamazoo (two cases, one fatal), May 31; at Battle Creek (three deaths, no cases remaining), May 31.

THE KANSAS CITY DISTRICT MEDICAL SOCIETY AND THE NEW YORK CODE OF ETHICS.—At the thirty-first quarterly meeting of the Kansas City District Medical Society, held June 1, 1882, the following resolution was adopted:

Resolved, That we, the members of the Kansas City District Medical Society, reaffirm our allegiance to the Code of Ethics of the American Medical Association, under which we are organized, and do hereby instruct our delegates to act accordingly at the approaching national meeting in St. Paul.

THE VIS MEDICATRIX NATURÆ.—Dr. Oliver Wendell Holmes, in an address to the Medical Class of Harvard College, on "Medical Highways and Byways" (*Boston Med. and Surg. Journ.*, June 1, 1882), wittily said: "Whatever other theories we may hold, we must recognize a *vis medicatrix* in some shape or other. '*Je le pensay et Dieu le guarit*' (I dressed his wound and God healed it), was the saying of Ambroise Paré, which you may read to-day on the walls of the lecture-room of the École de Médécine in Paris. The operator amputates a limb and leaves a bleeding wreck after him. What surgeon who looks on the rounded and cushioned stump a few weeks later can help owning

> 'There's a Divinity that *shapes our ends*,
> Rough hew them how we will?'"

DR. HOLMES ON HOMŒOPATHY.—In the same address, Dr. Holmes gives the following estimate of homœopathy, the careful study of which we commend to the supporters of the New York Code: "Homœopathy has no *status* among the biological sciences, and has nothing of any practical value, so far as I know, to offer the medical profession. It began by promising to prevent scarlet fever, which it miserably fails to do, and from that day to this it has been a romance of idle promises slipping through the fingers like quicksilver, evaporating without residue like ether from the palm of the hand. If any one of these promises had been fulfilled, if any single remedy brought forward by homœopathy had proved trustworthy and efficacious, it would have been thankfully accepted by the medical profession, which welcomes every method of help unless it shows itself with false pretences, and even then will appropriate any fraction of truth which underlies the deception or delusion. . . .

"So far as I can take account of the stock, the present assets of homœopathy consist of a pleasing and sonorous designation, a nomenclature of symptoms, with sets of little phials, containing globules, which are the prettiest and most fascinating of amulets, arranged to correspond with the nomenclature, a collection of "provings" which prove more about the prover than about the questions to be proved, and a doctrine which slips on or off like a kid glove, according to the company in which the practitioner finds himself."

ANGLO-AMERICAN MEDICAL SOCIETY OF PARIS.—The English and American Physicians resident in Paris have recently formed an association under the above name. The President for 1882 was Sir John Rose Cormack, who died recently; the Vice-President is Dr. Bishop.

DIASTASE FROM EGGS.—According to Selmi, egg-albumen contains a diastatic ferment (*Ber. d. Deutsch. Chem. Ges.*, 1882, 386.). If egg-albumen is mixed with three volumes of water, and then with a sufficient quantity of alcohol to precipitate the albumen, a substance remains in solution which can transform starch into sugar in aqueous solution.

Artificial diastase, that is, a mixture of albumen bodies and phosphates (which mixture is capable of converting soluble starch into sugar), is produced, if the albumen, precipitated as above directed, is several times washed with water on the filter, then boiled with a dilute solution of acid sodium phosphate, and the whole filtered. The resulting filtrate converts three times as much soluble starch into sugar as a pure solution of acid sodium phosphate.—*New Remedies*, May, 1882.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MAY 30 TO JUNE 5, 1882.

MAGRUDER, D. L., *Major and Surgeon.*—Medical Director Department of the Missouri. Granted leave of absence for one month.—*S. O. 110, Department of the Missouri, June 1, 1882.*

BROWN, J. M., *Major and Surgeon.*—Having reported at these headquarters, is assigned to duty at Newport Barracks, Ky.—*S. O. 57, Department of the South, May 29, 1882.*

CALDWELL, D. G., *Captain and Assistant Surgeon.*—Upon completion of packing and turning over the medical supplies at Fort Sanders, to report to the commanding officer at Fort Fred. Steele, Wyoming, for duty as post surgeon.—*S. O. 56, Department of the Platte, May 29, 1882.*

O'REILLEY, R. M., *Captain and Assistant Surgeon.*—Now at Washington, D. C., to report in person to the attending surgeon at this station, for assignment to temporary duty in his office.—*S. O. 124, A. G. O., May 29, 1882.*

TAYLOR, M. E., *Captain and Assistant Surgeon.*—Now awaiting orders at St. Louis, Mo., to report in person to the Superintendent Mounted Recruiting Service, for temporary duty at the Cavalry Depot, Jefferson Barracks, Missouri.—*S. O. 126, A. G. O., June 1, 1882.*

TESSON, L. S., *Captain and Assistant Surgeon.*—Relieved from duty at the Cavalry Depot, Jefferson Barracks, Missouri, and to proceed on July 1, 1882, to San Antonio, Texas, and report in person to the commanding general Department of Texas, for assignment to duty.—*S. O. 126, c. s., A. G. O.*

DAVIS, WM. B., *Captain and Assistant Surgeon.*—Having reported at these headquarters, will proceed to Fort Totten, Dakota Territory, and report to the commanding officer of that post for duty.—*S. O. 86, Department of Dakota, May 24, 1882.*

CARTER, E. C., *First Lieutenant and Assistant Surgeon.*—Having reported at these headquarters, is assigned to duty at Camp Price, Arizona Territory.—*S. O. 78, Department of Arizona, May 24, 1882.*

RAYMOND, H. I., *First Lieutenant and Assistant Surgeon.*—Having reported in compliance with S. O. 103, c. s., A. G. O., is assigned to duty at Whipple Barracks, Arizona Territory.—*S. O. 77, Department of Arizona, May 22, 1882.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

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ORIGINAL LECTURES.

THE PATHOLOGY, DIAGNOSIS, PROGNOSIS, AND TREATMENT OF ECLAMPSIA.

Abstract of a Clinical Lecture delivered at the Obstetric Clinic of the Vienna General Hospital on May 20, 1882.

BY PROF. CARL BRAUN.

(Reported specially for THE MEDICAL NEWS.)

A young woman sixteen years old was recently exhibited to the class, whose labor-pain had scarcely begun, whose temperature was remarkably low, 36.3° C., but who was suddenly seized with eclampsia. Chemical examination of the urine demonstrated the presence of albumen in a high degree. Immediately after the seizure a subcutaneous injection of morphia was given. Within an hour, however, a second seizure occurred; the forceps were immediately applied, and a healthy child of 3000 grammes was extracted. Within the next two hours the patient was given 5 grammes chloral-hydrate in form of clysters. The first attack lasted from 5 o'clock A. M. until 11 o'clock P. M. Next day there followed severe attacks. The patient presented a moribund appearance; lay in profound stupor; respiration was impeded by the high degree of œdema of the lungs; pulse very frequent and intermitting. The temperature, however, remained normal; and, in consequence of this circumstance continuing, a diagnosis of impending death could not be positively made.

In view of the deep stupor of the patient, the exhibition of chloral-hydrate was stopped, and ether injections substituted. According to the rule, in eclampsia albumen appears first in the urine; afterwards the convulsions follow. The cases wherein eclampsia is not bound up with albuminuria are only exceptionally observed, and the coincidence of eclampsia with acute Bright's disease is an indisputable fact. Others have gone further in the comprehension of this dangerous disease of pregnancy, and have affirmed that eclampsia is the symptom, the effect, of Bright's disease. Women seized with eclampsia, and whose urine contains no albumen, generally have *amyloid degeneration* of the kidneys. Prof. Braun distinguishes these cases as being particularly dangerous, saying: "I have observed cases in which the labia during pregnancy presented tumors the size of my fist, and whose urine was perfectly free from albumen. Some weeks later eclampsia set in, which led to death without a trace of albumen appearing in the urine. At the autopsy, however, *amyloid degeneration* of the kidneys and muscular substance of the heart was always demonstrable." Spiegelberg's researches have demonstrated the fact that eclampsia is caused by uræmic intoxication, which, in turn, is caused by the insufficient secretory power of the kidneys. Prof. Ludwig, however, has never succeeded in obtaining carbonate of ammonium, which should be excreted through the kidneys, in the blood of eclamptic women. The cause of the albuminuria itself is possibly a *blood stasis* in the kidneys, caused by pressure of the uterus upon the renal veins. Upon this account Prof. C. Braun advises, *in pregnant women, to empty the uterus as rapidly as possible.* To this end labor-pains can be summoned by rupture of the membranes of the egg. The continuance of labor-pains is viewed as a moment favoring recovery. Occasionally existing diseases of the kidneys can produce albuminuria, with its dreaded consequences—diseases which, upon the one hand, may be so slow and insidious that neither patient nor physician suspects their presence, and, upon the other hand, may act so rapidly that their effects are apparent in twenty-four hours. It is, therefore, always necessary to be on one's guard and diligently examine the urine. As regards *prognosis*, one-half of the women seized with eclampsia, as a rule, die. Prof. Braun's statistics are, 25 per cent. die, 75 per cent. recover.

Rapid heart action exercises an unfavorable influence upon the course of the disease and clouds the prognosis, since acute fatty degeneration and paralysis of the cardiac muscle may occur. The appearance of high skin temperatures, and the addition of dyspnœa through œdema of the lungs, signify likewise an unfavorable turn. Death follows in such cases, either through acute asphyxia in consequence of respiratory tetanus, or in coma in consequence of exhaustion of the nervous system. The life of the fœtus is imperilled only so long as it remains within the uterus, and is nourished by the maternal uræmic blood. Heredity in eclampsia up to the present time is in no degree established.

In eclamptic cadavers, anæmia of the brain, lung, and cerebral œdema, *particularly remarkable alterations* in the *kidneys* are almost without exception found. The kidneys may be hyperæmic, may have undergone fatty degeneration, or may be atrophied; a swelling of the Malpighian bodies will always be observed; the pyramids dark brown; the urinary tubules bright yellow, and when the capsule is detached, dendritic bloodvessels are seen dispersed in the parenchyma of the kidneys.

The patient, forming the text of Prof. Braun's remarks, was immersed up to the neck in a bath of hot water, 36° C., in order to lessen the existing œdema of the lungs. After twenty-five minutes' stay in the bath, she was warmly covered up, in order to hasten an excretory sweat. *Pilocarpin* is no longer employed in this clinic, as satisfactory experiences have not been obtained with it. Pilocarpin is, indeed, a good diaphoretic, but it has the disagreeable quality that, in its first action, it causes a lung œdema, which may itself directly endanger the life of the patient. Pilocarpin also has less influence in increasing activity of labor-pains than a warm bath. *Venesection* also is not permitted in Prof. Braun's clinic. He says he does not consider cerebral œdema or hydræmia to be indications for blood-letting; moreover, if the patient does not die from the direct effect of the bleeding, this procedure has had nothing to do with her recovery.

The young patient had, in all, ten severe attacks, which after the administration of the bromide of potassium stopped (whether or not in consequence, is doubtful), lay in profound stupor two days and two nights, as no other being in the clinic had done, and died after she had given a remarkable exhibition of a strong constitution. At the autopsy the usual lesions of eclampsia were found—intense œdema of the brain and lungs, fatty metamorphosis of the kidneys. What was especially interesting, however, and what is of great importance in the etiology of this disease, was the condition of the ureters. *The abdominal aorta divided itself into its two terminal branches much higher than usual, and in their course over the common iliac arteries both ureters were "kinked" to the occlusion of their lumen.* Both ureters below

his point, at which they were bent, were about the size of a quill. Above this point the right ureter was the size of the little finger, the left one the size of the thumb. The walls of the tubes above the angle of flexion were very much thinned out. Prof. Kundrat, who conducted the autopsy, had recently opportunity to observe a similar case. The case itself offered the most palpale demonstration that urinary stasis was the cause of the Bright's disease, and all the consequent evils.

ORIGINAL ARTICLES.

THE ADVANTAGES OF THE ANTISEPTICALLY MOIST SPONGE DRESSING.

BY GEORGE McCLELLAN, M.D.,
SURGEON TO THE PHILADELPHIA HOSPITAL, LECTURER ON SURGERY, ETC.

THE management of wounds has always occasioned much careful consideration among surgeons, and there are various methods, all of which have many zealous followers. To the unprejudiced mind, that plan would seem to be the best which equally meets the requirements of grave or simple cases, and is easily obtainable. I claim that this is true of the sponge dressing. Of those methods in common use, statistics hardly prove that one form is more surely successful than the others. There are objections to all, and I do not venture to assume that objections may not be found to that which I am about to advocate, but the very satisfactory results which I have had from the use of sponge as a surgical dressing, both in hospital and private practice, leads me to suggest its more common adoption in this country. The advantages of a sponge are: *first*, its simplicity of application; *second*, its certainty of effect, owing to its natural qualities and receptive capacity; and, *third*, its efficiency as a compress.

The first recommendation will be shown when I describe the manner in which sponge should be applied.

Although the manner of treating wounds as advanced by Lister, founded on the germ theory, has not met with general acceptance, it cannot be disputed that one drop of pus retained in a wound will occasion rapid proliferation of other pus cells; and, therefore, most practical surgeons resort to the use of some measure for the purpose of preventing the formation of unhealthy discharges in a wound, or, if they cannot be avoided, for their proper removal as fast as they collect. For this purpose different forms of drainage tubes, strands of thread or horsehair, have been employed, but none have given entire satisfaction. The peculiar inherent property of suction which the animal texture of sponge exerts, when moistened, affords the best means of drainage, and experience with this dressing leads me to believe that, if properly applied, it renders a drainage tube entirely unnecessary. This in itself is a great advantage, as a drainage tube has only too often been found to act as a foreign body, and to produce that which it was used to prevent. In several instances in my first trial of this dressing, the only point of a wound which was found ununited on the removal of a sponge, which had necessarily been retained many days, was the space occupied by the drainage tube. Only a sponge can do two things at once, *drive fluids to the surface, and take them away at the same time*. Its being kept constantly moistened, is of course the condition upon which both these valuable qualities depend. It admits, therefore, of the best means of employing a disinfecting solution. Various agents have been tried with a view to preventing unhealthy action, and none has seemed to answer all the requirements as well as carbolic acid, which, from its ready solubility in water, can be used in any desired strength.

The efficacy of sponge as a compress should not be underrated, as it is very generally recognized that gentle, uniform, and quiet compression discourages inflammation, and that pain is diminished by proper adjustment and rest. There are few means so admirably adapted to these ends as a sponge properly applied over a wound. The elasticity of a sponge when moistened admits of equable and diffused uniformity of pressure, so that it will maintain thorough coaptation of the superficial structures at the same time that it brings the deep parts in easy and close contact, thereby favoring union by the first intention.

In selecting a sponge, it should be soft, and large enough to cover in the wound completely. (In cases of large breaches of surface, two sponges will answer.) It should be trimmed so as to fit over the parts nicely, and moistened with a carbolic solution (1–30). It should be applied directly to the surface, over the sutures, and retained by adhesive strips or a roller, which can be adjusted so as to exert any amount of pressure. Its absorbent properties depend upon its being kept moist, and for this purpose holes should be cut in the strips of plaster to give free access to liquids. A few drops of a weak solution of carbolic acid should be poured into the openings every few hours—enough to keep it moist, but never to saturate, as in that case its efficiency would be greatly impeded. If it is desirable to keep the parts perfectly undisturbed, the sponge may be left many days, but I generally prefer removing it daily. With this in view, I always provide myself with two similar sponges, so that one may be kept constantly soaking in the fluid whilst the other is in use. When a sponge is removed it will be found to contain whatever discharges may have occurred from the wound, and it should be thoroughly washed out in boiling water and cleaned, and then put in the solution.

In illustration of this method of dressing wounds, I will venture to record several cases which may seem of interest:

CASE I.—On the 15th of June, 1881, I amputated, by the flap method, the thigh of a woman at the Philadelphia Hospital. As soon as the vessels were ligated, and the hemorrhage stopped, I united the flaps with deep silver wire sutures, and applied a large sponge, prepared as I have described, immediately to the surface of the wound, completely embracing the stump. Several broad strips of adhesive plaster were used to retain the sponge in place, and so as to exert gentle and uniform pressure. The dressing was removed and reapplied daily. At the first change, a very small quantity of the usual sanious exudations was found in the sponge, and the discharge diminished with every

dressing. The temperature reached 100° on the second night, but afterwards remained normal throughout. In two weeks from the date of operation the wound had healed, except immediately over the bone, which showed a tendency to protrude, owing to muscular and tegumentary retraction, and I decided to remove it an inch higher up. In spite of this drawback, on the twenty-first day, when the ligature from the femoral artery came away, the second wound had healed, and the patient was allowed to get up and go about on crutches.

CASE II.—On June 7, 1881, I operated for strangulated hernia on a private patient, Mrs. L. The protrusion was in the right inguinal region, very small, and the intestine intensely livid. The sac was opened; one ligature was required. The wound was united, and the sponge dressing was employed with a spica bandage, through which openings were made to receive the antiseptic fluid. On the fifth day the wound was entirely healed and a truss adjusted, so that the patient was able to leave her bed.

CASE III.—On the same day, June 7, I operated on a case of strangulated inguinal hernia, in a man at the Philadelphia Hospital. The patient had been in the medical wards suffering with pneumonia, from which he was recovering when the accident occurred. There were a great number of adhesions, and the hernial sac had to be opened before the bowel could be restored to the abdomen. Several branches of the superficial vessels required ligature. The sponge dressing was applied in the same manner as for the other patient. The wound progressed very favorably, but the exposure at the time of the operation brought on a return of the pulmonary trouble, from which the patient died on the third day. The autopsy revealed no peritonitis.

CASE IV.—I removed the thumb and its metacarpal bone for L. D., on May 22, 1881, in consequence of a felon. The sponge treatment produced immediate union, which was completed on the fifth day after the amputation.

CASE V.—A case of compound skull-fracture (the notes of which appeared in the January number of the *Medical Bulletin*) was also treated locally with the sponge dressing, which served to drain all the discharges and hemorrhage from the wound, and prevented their accumulation, which might have occasioned compression, etc.

I could instance numerous other cases, but have only selected these, trusting that they may in some measure serve to induce others to make trial of what I believe to be a useful contribution to practical surgery.

The idea of employing sponge in this manner first occurred to me in the spring of 1879, when, after reading the "Lectures upon the Treatment of Wounds," by Sampson Gamgee, I was making trial of *infrequent dressing*, which he strongly advocated. I found that by using oakum or cotton, with compression uniformly and steadily exerted over wounds, union by first intention was remarkably rapid and almost always certain. In one case, in which I removed the right breast for a large scirrhous tumor, the dressing was retained a week without disturbance, and the wound was found united on its removal.

In this case I used sponges which had been soaked in a carbolic solution, and afterwards thoroughly squeezed out, for the purpose of mopping out the wound, acting on the principle laid down by Mr. Gamgee, that unnecessary fluid in contact with the surfaces would be likely to occasion suppuration. Although I was very fortunate in the results of the method of leaving the dressings undisturbed, and judging of the progress of the wound towards healing by the pulse and temperature, I felt uneasy lest I should sometimes find a pent-up collection of discharges, knowing the value of drainage. This led me to think of substituting sponge for the oakum or absorbent cotton, and I found it to act most satisfactorily. I have since learned from the "Surgical Enquiries" of Mr. Furneaux Jordan, of London, that he had been using it previous to my independent experiments.

As the first to apply sponge as a dressing, I fully accord to Mr. Jordan, therefore, the credit of its originality, and I have further to thank him for much which has been of service to me in completing my observations.

Its simplicity of application has led me to abandon the plan of keeping the dressing on longer than twenty-four hours, except in cases where steady pressure is the main requisite, as in clean-cut wounds, without the possibility of the inclusion of a foreign substance.

In the *Lancet*, of October 15, 1881, Mr. James Hardie has a paper "On the Use of Sponge Pressure as a Surgical Dressing," in which he shows how admirably adapted this dressing is for avoiding the accumulation of inflammatory products within the cellular interspaces of connective tissue, by exercising sustained pressure upon the adjusted surfaces of a wound. But Mr. Hardie merely alludes to the absorptive property of sponge, which I have endeavored to show is really one of its most valuable features, and, although equally alive to the disadvantages of drainage-tubes, does not seem to consider that by keeping a sponge moist it will act as a substitute. He appears to rely mainly upon its elasticity and compressibility. He speaks of employing antiseptic measures throughout its application, and of numerous outer coverings, so that his method of using sponge is really but another form of Listerism, with the addition of the element of pressure. It is singular that he, too, seems to have been ignorant of the writings of Mr. Jordan, and it is all the more so, seeing that he is one of his own countrymen, to whom the profession owes so much for original and progressive thought.

It will be readily understood from the above account that sponge is equally suited for the treatment of open or closed wounds, and, therefore, is capable of fulfilling every requisite as a surgical dressing. I may add that I have employed the method of sponge pressure very extensively in cases of carbuncle and abscess, in place of poultices, and have, with the addition of counter-irritation, had invariable success in rapidly draining out the slough or collection of pus, and in producing healing by gentle and steady pressure, without pain or annoyance.

ON THE TREATMENT OF TYPICAL PNEUMONIA WITH SALICYLATE OF SODIUM AND FRESH LEMON JUICE.

BY THOMAS H. BUCKLER, M.D.,
OF PARIS, FRANCE.

WITH regard to typical cases of ordinary pneumonia having no apparent relation to, connection with, or dependence on, rheumatism, it has always been a puzzle with me to know why, in a given number of cases, say sixteen, five recover in four or five days, five others in eight or nine days, and five more in twelve or thirteen days, while in the sixteenth case the engorgement persists until dispersed perhaps by a critical discharge of pus, hemorrhage, or the deposit and softening of tubercles. Why the marked chronological difference in cases to all appearance alike and perhaps typical?

May not the answer be, that the difference in duration depends on the extent to which the fibrous structures, entering into the composition of the terminal air tubes are involved in rheumatic or erethysmal inflammation?

This subject pursued inductively from the first, seems likely to culminate in a doctrine of great simplicity, which is that all pneumonia, unless rheumatic, intercurrent with phthisis, or clearly dependent on intermittent or remittent fever the patient has had the previous winter, autumn, or spring, is distinctly and essentially rheumatism. This point once established, would save the trouble of going into nice questions of differential diagnoses, since it will teach that all pneumonias from exposure to cold will have to be treated as and for rheumatism only. This would be medicine, or rather diagnosis, made easy, at least so far as the treatment of pneumonia is concerned.

Guided by this interrogatory theory, I last winter, during the influenza season, prescribed salicylate of sodium in doses of 15 grains every six hours, to a young servant man who presented the following signs and symptoms: a flushed face, pulse 128, respiration 32, rust-colored sputa, the pneumonia cough, and over the lower third of left lung tubal respiration, bronchophony, and dulness on percussion. Five days having elapsed, he came to know if he might stop the salicylate, and to say he was perfectly well, as he seemed so far as I could judge.

The only other case was that of a woman, aged about 50, who presented a perfectly typical case of engorgement in the first stage running into the second, in the middle lobe of the right lung. Ordered salicylate of sodium in doses of 15 grains every six hours. The following day she had all the signs of red engorgement. The dispersive salt seeming not to have taken its usual hold, the urine was examined and found invaded with the triple phosphates of soda, magnesia, and lime, to dissolve which lemonade was ordered to be given daily as an adjuvant to the leading remedy. At the end of four more days the engorgement had entirely cleared up.

These two cases are very good signboards to point out the way, and it appears to me they show that salicylate of sodium and lemon juice, given according to the indications herein specified, demand at the hands of clinical observers careful and thorough trial.

HOSPITAL NOTES.

VIENNA GENERAL HOSPITAL.

(Service of PROF. CARL BRAUN.)

MEASUREMENT OF PELVIC DIAMETERS.

(*Specially reported for* THE MEDICAL NEWS.)

IT often becomes necessary for the practising physician to decide whether or not a young woman can safely marry. To make a correct reply to the question, an examination, naturally, is required. It is always well, however, to avoid an internal examination, as the hymen can be very easily injured by this procedure, and most Austrian husbands lay great weight upon the intact condition of this membrane. It is much better to direct attention to external examination of the pelvis, and from such data deduce the dimensions of the pelvic cavity.

This method, originally introduced by Bagrau, Prof. Carl Braun caused to be illustrated upon the person of a woman with a pelvis narrowed in every diameter.

The circumference of the pelvis is obtained by applying a tape measure to the symphysis and spine of the last lumbar vertebra. The case examined measured 75 cm.

The average, normal circumference of the pelvis, according to Stein, is 90 cm. (34 inches) and the conjugate diameter 11 cm. *For every diminution of 5 cm. from this normal circumference, a diminution of 1 cm. from the conjugate diameter must be allowed.* This rule is purely empirical. For example:

A pelvic circumference of 90 cm. signifies a conjugate diameter of 11 cm.

A pelvic circumference of 85 cm. signifies a conjugate diameter of 10 cm.

A pelvic circumference of 80 cm. signifies a conjugate diameter of 9 cm.

A pelvic circumference of 75 cm. signifies a conjugate diameter of 8 cm.

Small differences from the normal measurement have, of course, no significance when, ex. gr., upon the one hand, a very thin abdomen, and, on the other a rich development of the panniculus adiposus influences the results. Luxations of the femur can lead to false measurements, and must be carefully noticed.

Baudelocque's calipers give the remaining necessary factors. In the case examined, the distance between the spin. os. il. ant. sup. 22 cm. (instead of the normal, 25 cm.); between crist. os. il. 26 cm. (instead of the normal, 28 cm.); troch. 30 cm., conjug. diagon. 10 cm., conjugata vera 8.5 cm.

The distances between the spin. os. il. ant. sup. and crist. os. il., are thus seen to differ by 4 cm., and since the differences between these distances in a normal pelvis are between 3 and 4 cm., one is justified in designating this pelvis, under examination, a generally equally normal pelvis.

Although these methods of pelvic measurement are very simple, yet they constitute the important basis upon which all surgical operative procedures must be founded.

From facts deduced in this manner, the well-being of *two* individuals simultaneously depends.

MEDICAL PROGRESS.

SEQUEL TO A SUCCESSFUL CASE OF NEPHRECTOMY.—At a meeting of the Obstetrical Society of New York,

DR. T. G. THOMAS narrated the further history of a case reported in the MEDICAL NEWS for January 7th, in which he had removed the kidney. Symptoms of commencing Bright's disease began to develop; within six weeks the urine became albuminous and contained casts, but was normal in quantity. Slight œdema was present under the eyes, as in scarlatinal nephritis. He had at first feared that the other kidney would become diseased and cause death, but after two or three weeks the urine cleared, the albumen and casts disappeared, and the patient had left the hospital cured. Dr. Thomas thought the case elucidated the views promulgated by Dr. Johnson, about twenty-five years ago, who thought that a great many cases of Bright's disease were due to excessive work demanded from the kidneys, as when the skin failed to act properly or during the presence of some poisonous element in the blood. In the present case, one of the kidneys being removed, the other had suddenly to perform double work, became congested, the tubules shed their epithelium, and the other symptoms mentioned began to appear.—*Amer. Journ. of Obstetrics*, June, 1882.

QUINIA IN SMALL-POX.—DR. VECHTOMOFF (*Vracheb. Vedom.*, No. 10, 1882), following Dr. Stiemer's recommendation, administered to seven patients with small-pox (in the initial stage) quinine in doses of 12 to 120 centigrammes, and reports on the results of this plan as follows: 1. All the patients treated by quinine presented relatively slight eruption, while almost all other patients, intentionally left without quinine, were covered with confluent pustules. 2. All the patients treated by quinine recovered, while the mortality in all the other cases during the epidemic given was as high as 20 to 30 per cent. 3. All the cases treated with quinine were quite free from any complications, while almost all those treated otherwise were gravely complicated. 4. In the quinine cases the suppurative fever was slight, or was absent altogether. The author recommends a fair trial of this simple plan of treatment. —*London Med. Record*, May 15, 1882.

TREATMENT OF WHOOPING-COUGH BY THE BENZOATE OF SODA.—DR. FORDEUS writes, in the *Journ. de Méd. de Bruxelles*, that he has employed the benzoate of soda with remarkable success in four cases of whooping-cough. The formula he uses is—benzoate of soda, 5 grammes; mint water, distilled water, each 40 grammes; syrup of orange peel, 10 grammes. Teaspoonful every hour.—*Journ. de Méd. de Paris*, April 22, 1882.

CASE OF CURED SPINA BIFIDA.—At the meeting of the Clinical Society of London, held April 28, MR. PEARCE GOULD read notes of a case of cured spina bifida, which was shown at a previous meeting of the Society. The child was six months of age when placed under his care, and was a very healthy, well-developed boy. A tumor was situated over the lumbar spines, about the size and shape of a tomato, covered with healthy skin, sessile, fluctuating, and translucent. The tumor became very tense when the child cried, and pressure on it caused fulness of the anterior fontanelle. No paralysis or talipes. The tumor had been steadily increasing in size since birth. Mr. Gould drew off about an ounce of the contained fluid, and injected a drachm of Morton's iodo-glycerine solution. As no effect was produced, in a week's time, he repeated the operation, this time injecting a drachm and a half of the solution. No bad symptoms occurred, and the tumor became solid and shrank, until it remained as a puckered fold of skin only. The fluid removed was analyzed by Dr. Dupré, who failed to find even a trace of sugar in it, showing that it was arachnoid, and not subarachnoid fluid, and Mr. Gould pointed out that this was the most favorable variety for radical treatment. By experiment he found that the iodo-glycerine solution did not really mix with the fluid, but when poured into it sank to the bottom, thus confirming Dr. Morton's theory.

Mr. Parker thought that from the healthy skin over the tumor and the absence of all complications, the case was one likely to have been successful. He treated a case in the same way about five years ago, and at the present time the tumor had almost shrunk up; but hydrocephalus had developed, and a tendency to talipes valgus had been noticed. He had injected Dr. Morton's solution in another case that day. He had also been called upon to treat a case in which the sac had been boldly slit up; and in cases with very thin sacs, he thought such an operation, with antseptic precautions, might offer the best chance.

Prof. Lister said the case was a very favorable one for such treatment, and it was useful to have another proof of its value. He thought it the best treatment at present known. He had himself attempted the treatment of spina bifida by antiseptic drainage; at first with a small drainage-tube, and the result was disastrous, evidently from the free flow of the cerebro-spinal fluid. He, therefore, used a drain of only two horsehairs, but even the flow so caused proved fatal, and the child sank from inflammation from loss of support to the brain. He, therefore, thought that antiseptic drainage or incision did not offer a prospect of success.

Mr. Pearce Gould, in reply, referred to three other cases under his care, in which he had carried out the same treatment. In one the child died after the second injection from suppurative spinal meningitis; a second was lost sight of; in a third the sac consolidated, but the child died of concurrent hydrocephalus. This latter child was profusely salivated the day after the injection, probably from the absorption of iodine. In a case under Mr. MacNamara's care, in which the sac was exceedingly thin, success had been obtained by the repeated injection of the same solution. At the first operation the child almost died from the effects of loss of the cerebro-spinal fluid.

Prof. Lister said that Dr. Morton had pointed out this danger, and that latterly he had recommended that no fluid should be withdrawn.—*Lancet*, May 6, 1882.

THE RELATIONS OF ASTHMA TO NASAL POLYPI.—DR. JOAL draws the following conclusions from a careful study of this subject:

Mucous nasal polypi often occasion dyspnœa of asthmatic character, which is most often observed in arthritic subjects. It is generally explained as a reflex irritation, starting from the nasal mucous membrane and implicating the branches of the pneumogastric distributed to the pharyngeal and bronchial mucous membrane. Asthma may also be developed by catarrhal and emphysematous lesions attributable to nasal polypi. The asthma will generally disappear when the polypi are removed.—*Arch. Gén. de Méd.*, May, 1882.

GENERALIZED VACCINE ERUPTION.—DR. GUÉNIOT detailed to the Académie de Médicine (*Union Méd.*, May 18, 1882) the following interesting case: He practised six vaccine punctures on an infant five months old, the subject of an eczema then in a state of retrogression. On the fourth day there appeared over the papulæ, which had become visible at each puncture, large, well-developed vesicles, resembling those of the sixth or seventh day, and furnishing very abundant vaccinal lymph. On the seventh day there appeared on the shoulders, arms, and chest a multitude of small papulæ, which next day were translated into as many vesicles. By the next day there were at least

300 well-developed vaccinal pustules. The infant had fever, irritation, and sleeplessness to a degree that was somewhat alarming; but by the fourteenth day there was general desiccation, and on the seventeenth the child was convalescent. Dr. Guéniot, believing that the excoriations of the skin from the eczema, by multiplying the means of absorbing the virus, might have been one cause of this "pullulation," asked whether, in children suffering from eczema, vaccination should be deferred. He replied negatively, believing it preferable to expose an infant to the chance of this rare occurrence, than to taking so serious a disease as small-pox. But he is of opinion that two punctures instead of six should be practised, one on each leg. Prof. Blot, however, was of opinion that, unless an epidemic of small-pox was prevailing, it would be better to defer vaccinating infants who are the subjects of eczema or impetigo. There are, indeed, several cases similar to that of Dr. Guéniot on record. M. Hervieux also referred to several cases that have been published, in which a more or less confluent vaccinal general eruption occurred in eczematous children. Still, it is rare, for in 15,101 vaccinations he had practised for the Academy he had never met with an instance, although many of the infants were eczematous; and he thinks that vaccination should not be postponed on this account. Dr. Guénoit observed, in reply, that the very fact of these generalized vaccinations occurring was an argument in favor of great susceptibility to the contagion of small-pox, and a strong reason for not delaying vaccination.—*Med. Times and Gaz.*, May 27, 1882.

EXTIRPATION OF THE FŒTAL SAC IN A CASE OF TUBAL PREGNANCY.—In January, 1880, LITZMANN (*Arch. f. Gynäkol.*, XIX., 1, 1882) performed laparotomy in order to remove a dead fœtus, in a case of tubal pregnancy. The fœtal sac was united to the abdominal wound, and drainage established. The patient finally recovered, but returned to the hospital a year later, on account of a large ventral hernia. To cure this, a radical operation was performed by excising the hernial sac, and carefully closing the wound by sutures. The operation was a success.

On examining the specimen, it was found to contain what was left of the fœtal sac, which had developed in the right tube.

It being an established fact that, not only in abdominal, but also in tubal or ovarian, pregnancy, the woman might go to full term, before undertaking any operation, we should try to ascertain with what variety we have to deal.

In case of abdominal pregnancy, there is little to be hoped from laparotomy; for it is impossible either to extirpate the fœtal sac or to remove the placenta without jeopardizing the mother's life—the more so, because decomposition of the liquor amnii frequently compels us to operate before placental circulation has ceased.

In case of tubal or ovarian pregnancy, it makes a great difference whether the development of the ovum was intra-ligamentous or whether it is pediculated.

If it was intra-ligamentous, it will also be impossible to extirpate the whole sac; yet we shall succeed in safely removing the placenta after placental circulation has stopped. Therefore, we might defer an operation until we are satisfied that this event has occurred. The thickness of the walls of the fœtal sac in tubal and ovarian pregnancy prevents decomposition of its contents, so that we do not risk anything by deferring the operation as long as necessary.

The most favorable cases for operation are such where the fœtal sac is more or less pediculated. If the attachments are not too extensive, we might remove the whole sac. If there is no doubt left as to the correctness of the diagnosis, we might even operate at term, thus saving the child, and reducing the dangers to the mother to those incident to ovariotomy.—*Amer. Journ. of Obstetrics*, June, 1882.

EXTIRPATION OF THE ENTIRE WOMB.—Extirpation of the uterus by laparotomy (Freund) has of late been superseded by that from the vagina. R. HAIDLEN (*Arch. f. Gynäk.*, XIX., 1, 1882), reports seven new cases of vaginal extirpation—four recovered, three died. The operation was done five times for cancer (three deaths, two recoveries), once for procidentia, once for retroversion, etc. The following is the history of this remarkable case: Nullipara, æt. 47. Twenty-one months previously a pediculated fibroid, as large as a middle-sized apple, had been successfully removed from the anterior lip. Uterus badly retroflected and firmly attached in Douglas' pouch. In order to better expose the field of operation and make room for the downward traction of the cervix, the perineal body was slit three centimetres deep backward. In separating the uterus from the rectum, the latter was accidentally opened. However, the patient did well; the recto-vaginal fistula closing of itself. Most of the symptoms incident to the flexion of the womb had disappeared.

He gives a synopsis of fifty-two cases of extirpation of the uterus through the vagina. Of these, eighteen (equals thirty-four per cent) died of causes incident to the operation (mostly septicæmia, once hemorrhage). The bladder was opened twice, the carcinoma having invaded its walls. The ureters were never injured.

H. is not very sanguine as to the final results of the radical operation in case of cancer. Indeed, in most of the "cured" cases, the recurrence of the morbid growth manifested itself in from six to twelve weeks. One case only which H. relates continues to do well eighteen months after operation. The surgeon should desist from total extirpation if, in case of cancer, the womb is more or less immovable, on account of attachment to its surroundings. In case of procidentia, adherent flexion, hyperplastic inflammation, hemorrhage, etc., the operation may be resorted to after all legitimate means have been faithfully tried in vain.

As regards the mode of operating, H. speaks strongly in favor of sewing up the wound of the peritoneum instead of using a drainage tube, in order to protect as soon and completely as possible the peritoneal cavity against infection from the vaginal wound.—*American Journ. of Obstetrics*, June, 1882.

PREPARATIONS OF IRON FOR SUBCUTANEOUS INJECTION.—Many stomachs are intolerant of iron, even when the general condition indicates the necessity for its use. In these circumstances, subcutaneous injection is useful; and the reason that this method has not up to the present time been much used, is that the proper preparation of iron for the purpose has not yet been decided upon. DR. NEUSS (*Zeitsch. für klin. Med.*, Band iii.) undertook a series of experiments on the powers of diffusion possessed by different salts of iron and their facility for absorption. He used Graham's dialyzer, and first made experiments on rabbits, the results of which he applied to the human subject. It would, however, be imprudent to draw absolute conclusions from experiments on animals, for the rabbit bears, without inconvenience, injections of iron, which in similar doses would bring on local troubles in the human subject. From his experiments, the author recommends in preference pyrophosphate of iron, associated with citrate of soda, which contains a large proportion of iron (26.6 per cent.). Next comes albuminate of iron, and, finally, the pyrophosphate of iron associated with citrate of ammonia; but this in one case appears to have brought on some troublesome symptoms.—*London Med. Record*, May 15, 1882.

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SEWERAGE IN PHILADELPHIA.

UNDER the above title there has recently appeared, as a supplement to the *National Board of Health Bulletin*, a report made to Col. George E. Waring, Jr., expert and special agent of the Census Office, upon the sewerage and house-drainage of Philadelphia. The report is based upon an examination made during the summer of 1881, by W. H. Baldwin, civil engineer. Following so soon after the more comprehensive and very elaborate report on the same subject by Rudolf Herring, civil engineer, who was commissioned to visit Europe for the purpose of studying in detail the sewerage and house-drainage of foreign cities, its publication adds increased interest to a matter of very general concern, and one of very special significance to the citizens of Philadelphia; more particularly is this the case, since the facts obtained are those of an independent observer, and, for the most part, agree with and corroborate those previously presented.

It is not pleasant to have one's faults displayed in broad daylight to the gaze of the whole world, but there are considerations which dwarf the first impulses of offended pride and feelings of shame, and render acceptable the severest criticism, if truthful. If a candid statement and free exposure of the serious evils of the present sewerage system shall arouse public attention, and lead to the correction of these faults, a boon will have been conferred upon the people, for which they should ever be thankful. The citizens of Philadelphia have now what the Scotch bard longed for when he sang:

"O wad some Pow'r the giftie gie us,
To see oursels as others see us!"

We sincerely hope, for the good of the people, that the opportunity may be improved.

The sewerage systems of the older cities were originally constructed to serve their immediate wants without any special reference to their future requirements. As the area of population increased, additions were made in continuation of the original restricted plans, and little or no effort appears to have been made to design a broad, systematic scheme as a basis of present and future works, so that every extension that might be required would be in strict harmony with the essential features of a well-matured and comprehensive system; at least, this is true of Philadelphia.

The sewers were originally designed to accommodate the surface water and to facilitate natural drainage, and, therefore, the prominent and necessary features of a system suitable for the removal of human excreta and the various waste products of a large city have been only imperfectly represented or omitted altogether. Nor has there been any radical modification or improvement in the practice instituted years ago, with a view to meet the new conditions and requirements of the present day. The method of construction, the character of the work, and the quality of the materials used, though exceedingly defective, would not have been so objectionable had the original functions of the sewers been strictly maintained. But gradually a change has been wrought in the manner of disposal of waste matters, so that at the present time it is estimated that "the sewers provide for the excreta of about one-quarter, and the house-water of about one-third, of the population." And this means of removing fecal matter and liquid filth from dwellings is becoming more common year by year. So soon as sewers become the receptacles of excreta and other waste matter of a population, it is imperative that the closest attention be bestowed upon their design, construction, and management, lest they become serious nuisances and jeopardize the public health. How rarely does it happen that this obvious requirement is carried into effect! The reconstruction of a system of sewers, when of any magnitude, is an expensive work which the authorities hesitate to undertake, unless driven to the task by a popular outcry, or by a plain exposure of glaring and serious faults, such as has been made in the report under consideration.

Philadelphia is fortunately provided with ample facilities for natural drainage, and the problem of devising an excellent modern system of sewers is one which presents no unusual difficulties in its solution. The system adopted in this city is what is called the "combined system," that is, the storm water and liquid waste from houses are both conveyed in the same conduits. This is in opposition

to the more advanced modern view of sewage-plans, which requires that the surface water shall go direct to the rivers, and the waste products from houses to an outfall, there to be treated according to some conservative plan, by which only the purified liquid shall escape into the river. But this objection would not be of serious import, provided there were no other palpable and grievous errors connected with the system. And here is where severe criticism begins. By the searching examination of Mr. Baldwin, defects in all the conditions which pertain to a satisfactory system of sewerage have been set forth with startling particularity. In the first place, no scientific thought has been bestowed upon the problem of a safe and proper outlet for the sewage, at least no practical exemplification of such a design has ever had the semblance of application. The only object seems to have been to convey the waste matter by the most direct route into the nearest water-course, irrespective of its ultimate relations to the public health. The sewers all discharge along the river front into the Delaware, and into the Schuylkill as far as the dam, and, to some extent, above the dam. In the latter case the amount discharged into the river is not by any means great; but any sewage, however small the quantity, discharged into the source of the city's water supply, especially when near the in-take, is a most serious evil. The Schuylkill River below the dam has not a constantly active current by reason of this obstruction, and it is therefore more or less foul from the incessant deposit of putrescible matters,—a condition tending to awaken anxiety, considering that the river lies between two very populous parts of the city.

The body of the water in the Delaware is great, and the current swift, and hence less evil might be anticipated from discharging sewage therein; but this discharge takes place in the slips, which are not much affected by tidal movement, and the consequence is the fouling and silting up of the slips with deposits, which is objectionable, if for no other reason than the constant expense of cleansing. But the fact must not be lost sight of that a very considerable part of the city is supplied with water pumped directly from the river in close proximity to the outfall of large sewers, and more or less influenced by the sewage discharged at more remote points by reason of the movements of the tide. It is needless to say that the remedy for these evils is the construction of a system of intercepting sewers by which the sewage which now flows into the Schuylkill above the dam, and is discharged into the two rivers along the city front, shall be intercepted and carried to one or more outfalls below the city, there to be treated in a manner the least injurious to the health of the city.

The main sewers form decidedly the least objectionable part of Philadelphia's system; but they are not altogether without fault. Even the best sewers are constructed without proper attention to design, care in construction, accurate and finished workmanship, and are unprovided with suitable means and facilities for ventilation and inspection, which all such works require to properly fulfil their mission, and rank with first-class specimens of engineering skill.

Of the branch sewers a less favorable report has been made. Instead of being constructed of a size to accommodate the maximum flow of sewage and storm water, and no larger, they are built almost invariably three feet in diameter, some 2.5 feet. The circular form has been strictly adhered to, in opposition to the almost universal experience that the ovoid or egg-shape is the shape best adapted to meet the requirements of the combined system. They are constructed of brick of very poor quality, "the lower half being laid, usually without mortar, directly upon the excavation which is formed to receive it," and the upper half in mortar. The interior surface is rough and uneven, instead of being smooth, so as to facilitate the rapid flow of sewage, and prevent retention of filth. The inverts are laid without cement, and as a consequence the sewers leak badly at every joint between the bricks, saturating the soil with putrescible matter. This action is greatly favored by the sluggish current caused by sedimentary deposits and other obstructions. Not only is too little attention paid to the quality of the materials, but the workmanship is, as a rule, of an inferior grade. It is, therefore, not surprising that the sewers so frequently settle out of shape, and eventually fall in.

Sewer-junctions are very faulty. House-connections are made in the rudest manner, just as the caprice of the plumber or his assistants may dictate, this important service being without supervision or regulation of any city official. The man-holes are rudely constructed, are without ladder-bars to facilitate entrance, and their covers are, with few exceptions, unprovided with gratings for ventilation. The catch-basins, or inlet-basins, are old-fashioned water-seal basins, the water-seal being about three inches deep. They are generally unprotected by bars or grating, and the basins proper accumulate filth and *débris* from the street and other sources, and become exceedingly foul. The sewers are practically without ventilation, and consequently are foul in the extreme. There is a total absence of appliances for flushing.

The maintenance, repairs, and cleansing of the sewers, of which there is constant need, is shown to be defective in every particular. We have not time to go into specifications, but one need only read the report of Mr. Baldwin to be convinced of the utterly inefficient and even reckless manner in which this work is performed.

From the large size of the sewers, their circular form, and the obstructions left by workmen, it is not surprising that these conduits are more or less filled with deposits which obstruct the flow and convert them into "elongated cesspools." It is not difficult to see how the soil becomes polluted by the escape of sewage through the fissures between the uneven and dry-laid bricks which form the inverts. By the absence of ventilation, the conditions favorable to the generation of noxious gases are greatly increased. With the presence of filth of every description, a sluggish current, moisture, heat, germs of disease, and the absence of circulation of fresh air, nothing more seems to be required for calling into activity those processes which give to sewer-air its poisonous qualities.

Enough has been shown to convince any one of the utterly faulty condition of the sewerage system of this city in nearly all its particulars, and to demand the immediate intervention of the authorities in behalf of thorough reorganization of the system according to the standard of modern engineering knowledge and skill, and the requirements of sanitary science.

It is useless to discuss the injurious influences upon the health of the inhabitants of this pernicious system as it exists to-day. It is too evident that the dangers exist, and are constantly threatening the public health through the agencies of polluted water supply, polluted soil, and polluted atmosphere. It is no proof to the contrary that the death-rate of Philadelphia is among the lowest of all great cities of the world. It is to other benign and antagonizing influences the city owes its reputation for salubriousness; and it is reasonable to assert that, if these favorable agencies were allowed to operate without this serious drawback, the result would be increased healthfulness. As Col. Waring remarks: "If under existing conditions the rate sometimes falls below eighteen per thousand, it is hardly too much to hope that by the complete purification of the soil, of the atmosphere, and of the water supply, which would follow the construction of a modern system of sewerage, and of universal and compulsory good house-drainage, a very considerable further reduction of mortality would follow."

At another time we propose to discuss another branch of this important subject, namely, house-drainage.

SUPERALIMENTATION.

WE have on several occasions called attention to the remarkable results obtained by Dr. Debove by his system of forced feeding. Chiefly employed at first in phthisis, it has, also, since been utilized in various states characterized by wasting. It has been found by Debove that food, reduced to an impalpable powder, mixed with milk, is readily introduced through the stomach tube, and is well borne. The powder which Debove now considers the best is composed of beef or horseflesh, desiccated, and then ground finely, mixed with a meal obtained by the grinding of beans. Six kilogrammes of fresh beef furnish, after desiccation, one of dried beef. He gives daily two hundred to four hundred grammes of the mixed powder. These dried foods seem to be readily penetrated by the gastric juice, and easily digested. They have, also, an agreeable taste. They are safer than fresh meat, for in the process of desiccation sufficient heat is employed to destroy parasites.

In a recent paper, Dujardin-Beaumetz thus sums up the results: "The therapeutical results obtained by the employment of alimentary powders are most remarkable. M. Debove has reported magnificent examples, and I have obtained analogous effects in my service, not only in the phthisical, but in other maladies where the nutrition is disordered."

The method has some inconveniences, and requires patience on the part of the invalid, and energy on the part of the physician, but the results appear to justify all the effort expended.

THE CIRCULAR OF THE BUREAU OF EDUCATION ON TRAINING SCHOOLS FOR NURSES.

WE are very glad to note the publication, by the Bureau of Education, of a "Circular of Information" on "The Inception, Organization, and Management of Training Schools for Nurses." The day of the good old motherly nurse who had picked up knowledge by experience—*i. e.*, by experimenting on her patients and learning the best way of doing things by having tried all the worst ways—and the day of the now classic Sairey Gamp and her friend, Mrs. Harris, are past. Moreover, the trained nurse is fast replacing the family, as it is seen that affection is a serious bar to the best care of the patient. Hence the increasing need of training schools for nurses, and the present circular will do much towards facilitating their establishment. In fact, no city of 50,000 or surely of 100,000 inhabitants should be without such a school. Yet Providence, Pittsburg, Cincinnati, Cleveland, San Francisco, Milwaukee, Richmond, and other cities we could name, have no such schools for nurses, though most, if not all, have good hospitals, which are the foundation for such institutions, and whose staff are usually the best instructors. There are seventeen such schools in the United States, as we learn from the circular. Of these, Boston and New York each have three, Philadelphia and Brooklyn each two, and the remaining six are in New Haven, Chicago, New Orleans, St. Louis, Syracuse, Washington, and Burlington (Vt.). The oldest are those in Phila-

delphia, that of the Lying-in Charity, dating from 1836, and that of the Woman's Hospital from 1861, the Bellevue Hospital School coming next in 1872. All the needful directions for organizing such a school will be found in the circular. In the appendix are given the Act of Incorporation, an application blank, and a nurse certificate from the Washington School as models, together with some addresses to the graduating classes of several schools. These in general are not, we must confess, of especial value, except the sparkling address of Dr. W. B. Garside, the Medical Director of the New York State School in Brooklyn.

THE COMPOSITION OF PODOPHYLLIN.

IN an elaborate research, Podwissotzki has ascertained that the resin of podophyllin is a composite substance. He finds that its cathartic action is due to the neutral and crystallizable picropodophyllin contained in picropodophyllinic acid, which together constitute the resinous podophyllotoxin. This substance, he holds, is not a chemical combination, but a mixture or solution. It has long been known that alkalies lessen the activity of podophyllin resin. Podwissotzki gives the explanation: the alkali combining with picropodophyllinic acid renders the resin picropodophyllin insoluble.

Podophyllotoxin is the active part, and is given in one-quarter to one-half a grain at bed-time. When the constipation is decided, one-half a grain may be given at once, but it should be remembered that a dose of two and one-half grains is regarded as dangerous, if not toxic. Solution in alchohol is recommended as convenient for administration:

R Podophyllotoxin. . . .	gr. ijss.
Alcohol rect. . . .	ʒiv. M.

Dose: 10 minims at a dose, in wine or whiskey.

ADMISSION INTO STATE MEDICAL SOCIETIES.

The *Boston Medical* reason than the constant expense of ... a chronological fact must not be lost sight of that ... Massachusetts considerable part of the city is supplied ... present time, pumped directly from the river in close ... as to the to the outfall of large sewers, and more or ... society. fluenced by the sewage discharged at more ... as to points by reason of the movements of the tide; ... eties is needless to say that the remedy for these evi... sey, the construction of a system of intercepting sew... is- by which the sewage which now flows into t... Schuylkill above the dam, and is discharged int... the two rivers along the city front, shall be inter... cepted and carried to one or more outfalls below the city, there to be treated in a manner the least injurious to the health of the city.

The main sewers form decidedly the least objection-

1872. Within the last ten years they have also been admitted to the following State Societies, making seventeen in all, viz.: Maine, New Hampshire, Vermont, Rhode Island, Connecticut, New York, Pennsylvania, Tennessee, Ohio, Iowa, Minnesota, Indiana, Illinois, and Oregon.

LITERARY NASTINESS.

No other word properly describes it. It is nastiness pure and simple.

In the *Boston Medical and Surgical Journal*, for June 8, is a translation of a passage in Zola's last novel, *Pot Bouille*, describing with painful and disgusting exactness the varied stages of a case of labor, and for filthy realism it surpasses anything we have ever seen. The plot of the book is *nil*, while seduction and obscenity are its staple. One of the characters, a child of fourteen, obtains ample keyhole information as to the sexual relations, and her nurse encourages her to illustrate it practically upon herself. Even in a medical journal such filth would never find a place save as here, to illustrate a point, but to find it on our drawing-room tables, scantily veiled in French, or temptingly half told in English (for the translator could not persuade himself to give quite all of it), is simply horrible.

Our youth of both sexes should be shielded from such contamination, not only by parental care, but by the strong arm of the law. We hope the Society for the Suppression of Obscene Literature will seize upon this and similar books, and both destroy them and punish the dealers who sell them. Surely, if the Attorney General of Massachusetts suppresses Walt Whitman's poems for a few indecent lines, such reeking obscenity as this ought to meet with swift and sure destruction.

WE notice in the *Gazette Medicale de Paris*, of April 22, a statement taken from the *Siglo Medico*, of Madrid, of two cases of spontaneous cow-pox in Spain, one at Arroes, in the province of Oviedo, and one in the province of Cuença. They seem from the reports to be genuine, and as especial interest obtains in the subject at present, *àpropos* of our recent thorough examination of the question of bovine virus, we direct the attention of our readers to the announcement. The stock may become as noteworthy as that of Beaugency.

WE are glad to see that Dr. Oliver Wendell Holmes' charming address at the dedication of the Hall of the Boston Medical Library Association is meeting with so appreciative notice from the English medical press. But what else could it receive?

Witty and wise; equally at home among the musty folios of the sixteenth century and the books that yet smell of the binder; always instructive; always

master of the purest English, the author is the bosom friend of the profession on both continents.

THE *Record's* "influential men in every part of the country," who wrote letters containing "the heartiest endorsement of the course of the *Record* in its advocacy of freedom in consultations," did not put in an appearance at St. Paul. They were doubtless kept away by pressing professional engagements. For some mysterious reason the *Record* has allowed many weeks to pass without responding to our request for those letters to which it referred with evident pride. The profession is very anxious to hear from those "influential men," and there is now even greater reason why the *Record* should, without further delay, publish those long looked-for letters, and the names of their authors.

SOCIETY PROCEEDINGS.

THE AMERICAN MEDICAL ASSOCIATION.

Thirty-third Annual Meeting, held at St. Paul, June 6, 7, 8, and 9, 1882.

(Specially reported for THE MEDICAL NEWS.)

(*Concluded from page 637.*)

FOURTH DAY—JUNE 9TH.

The closing session was opened by prayer offered by Rev. E. D. Neill.

DR. A. J. STONE, on behalf of the

COMMITTEE OF ARRANGEMENTS,

announced an invitation from Mr. Wm. Leip to visit White Bear Lake, and an invitation to all Sir Knights to the reception to be tendered this evening by Damascus Commandery, No. 1, K.T., to visiting Knights, at their asylum. He urged the members to participate in the excursions to Great Bear Lake, Duluth, Winnipeg, the Yellowstone, and other places of interest which had been mentioned.

THE REPORT OF THE LIBRARIAN,

DR. WM. LEE, of Washington, was read. It stated that during the past year there had been added 167 distinct titles. This addition makes the library consist at present of 1702 distinct titles, which comprehend, from a general estimate, about 4448 volumes, inclusive of pamphlets. The Boston Medical Library Association has generously placed a large number of its duplicate periodicals at the disposal of this library, which have gone far towards completing certain imperfect sets of the same, and thus materially assisted in its growth, due credit for which will be found to be given in the catalogue. Otherwise, with the exception of a few monographs donated by their authors, the library has been left entirely to its own resources to obtain periodicals by exchange and purchase. I have only to recommend, in conclusion, that the home and foreign exchanges be continued; that two hundred dollars be placed at the disposal of the librarian to be expended as heretofore for the especial purpose of binding and purchase of periodicals, proceedings and transactions which are to assist in the completion of sets, and that fifty dollars be again subscribed to the Index Medicus, under the same conditions as last year. This important and valuable periodical seems now to be established upon a more permanent and firmer basis, but this offer of pecuniary aid on the part of the Association is simply an appreciation of its merits and a desire to insure its success.

The report was accepted and the recommendations adopted.

THE REPORT OF THE TREASURER,

DR. R. J. DUNGLISON, of Philadelphia, was presented, and showed a balance of $1141.38.

THE COMMITTEE ON PUBLICATION

submitted their report. The Chairman announced that an index to the annual volumes to date had been prepared and that it would cost $800 or $900 to print.

On motion, it was ordered that, if sufficient funds for the purpose should remain in the Treasury after paying all the expenses, a general index of all the volumes of Transactions, including that for 1882, should be issued to members with the current volume.

FORFEITED MEMBERSHIP.

DR. KELLER, of Arkansas, moved that the Secretary be directed to erase from the rolls the names of members that have forfeited their membership. Adopted.

CREMATION.

Dr. Keller, of Arkansas, offered the following resolution:

Resolved, That in many of our large cities in the near future, if not now, cremation will become a sanitary necessity.

A motion to lay on the table was lost. After some discussion it was then referred to the Section on State Medicine and Sanitary Science.

THE DECLARATION OF PRINCIPLES

offered on the second day by DR. CHARLES DENNISON, of Colorado, was reported back to the Association by the Judicial Council without recommendation. It was, on motion, laid on the table.

EXPERT TESTIMONY.

The following resolution in regard to expert testimony was introduced from the Section on State Medicine, by DR. A. L. GIHON, U. S. N.

Resolved, That it is the sense of the American Medical Association that it will be conducive to justice and the dignity of the profession, if medical expert testimony can be presented to the Court without having the appearance of having any intention to influence either side of the case, but simply as an honest statement of scientific facts. Adopted.

MEDICAL EXAMINATIONS.

DR. J. G. THOMAS, of Georgia, offered the following resolution:

Resolved, That the Association approve the organization of faculties in medicine having no other foundation than the examination for degrees, as a measure which will increase the value of the present methods of education in medical colleges in this country.

DR. N. S. DAVIS, of Illinois, seconded the resolution in a speech defending the establishment of independent boards by the universities.

DR. RANSEHOFF, of Cincinnati, opposed the measure as casting a slur upon medical colleges and medical teachers. He contended that, as all classes of practitioners could demand and obtain representation on such boards as were contemplated by the resolution, such a measure would have the tendency to retard medical progress and encourage irregular sects by giving them legal recognition.

DR. GARCELON, of Maine, opposed the resolution and moved that it be laid upon the table. Lost—ayes, 75; noes, 132.

DR. N. S. DAVIS, of Illinois, said he was fully in favor, and had been for thirty years, of the principles

of independent examination, but now having brought the matter to the notice of the Association, thought that the same should be further postponed.

This was done by an unanimous vote.

"ALLOPATHS."

On motion of DR. DENNISON, of Colorado, it was

Resolved, That no action of this Association, either in its Code of Ethics or in its annual meetings, should be construed to commit members of the American Medical Association to adherence to any dogma, and members should have the care not to allow their names to be erroneously registered as "allopathists," etc., in State or city registers of physicians.

A STIPEND TO THE SECRETARY.

DR. EUGENE GRISSOM, of North Carolina, moved that an honorarium of $1000 be presented to the permanent Secretary for his services during the past year.

DR. J. M. TONER, of Washington, moved to amend by substituting $500. The amendment was lost, and the original resolution was adopted.

DR. H. O. MARCY, of Boston, moved a vote of

THANKS TO THE TREASURER,

for his long and faithful services to the Association. Unanimously adopted.

AMENDMENTS TO THE CONSTITUTION.

DR. TONER, of Washington, D. C., gave notice of an amendment by which the Secretary should serve without compensation.

DR. GOODWILLIE, of New York, called up his amendment to Article II., Section 8—permanent members—to strike out the words "but without the right of voting." Lost.

A NATIONAL MEDICAL COLLEGE.

DR. LAURENCE, of New York, offered the following:

Whereas, It is known that no school or college exists within the territory comprising the jurisdiction of the American Medical Association whose course of instruction fully meets the requirements of a practical medical education in all of its branches and specialties; and

Whereas, No school nor institution for the above purpose exist that is not more or less dependent upon tuition fees for its support; and

Whereas, It is the sense of the American Medical Association that the highest type of education and ability cannot be attained until the subject of tuition shall be entirely divorced from the subject of instruction and graduation, and that the cause of humanity and the cause of research alike demand such divorce; and

Whereas, It is desirable to establish an institution, national in character, whose various chairs, and whose curriculum shall represent and include every branch of medical science essential to the highest and most technical qualification, and which, while exacting from each graduate a full course in the different branches, shall at the same time be so endowed and equipped as to make attendance, study, and ability the sole condition of graduation; therefore be it

Resolved, That the President of the American Medical Association appoint a committee consisting of one representative from each State in the Union, whose duty it shall be to investigate the subject of the feasibility of creating and endowing such an institution as shall in their judgment meet the demands of this age of investigation and progress, and that said committee shall include in their report at the next annual meeting a more exact character of the school we need, and the ways and means that will best conduce to the accomplishment of the undertaking.

The resolutions were, on motion, laid on the table.

THE COMMITTEE ON NOMINATIONS

presented the following report:

President.—John L. Atlee, M.D., of Lancaster, Pa.

Vice-Presidents.—Drs. Eugene Grissom, of North Carolina; A. J. Stone, of Minnesota; J. A. Octerlony, of Kentucky; H. S. Orme, of California.

Treasurer.—R. J. Dunglison, M.D., of Pennsylvania.

Librarian.—C. H. A. Kleinschmidt, M.D., of Washington.

Chairman of Committee on Arrangements.—X. C. Scott, M.D., of Cleveland.

Assistant Secretary.—I. N. Himes, M.D., of Cleveland.

Members of Judicial Council.—Drs. N. S. Davis, of Illinois; J. M. Brown, of United States Navy; X. C. Scott, of Ohio; M. Sexton, of Indiana; N. C. Husted, of New York; Wm. Lee, of Maryland; J. E. Reeves, of West Virginia.

Committee on Necrology.—Dr. J. M. Toner, of Washington, Chairman.

Committee on Publication.—Dr. W. B. Atkinson, of Philadelphia, Chairman.

OFFICERS OF SECTIONS.

Practice of Medicine.—Drs. J. H. Hollister, of Illinois, Chairman; J. G. Lee, of Pennsylvania, Secretary.

Surgery and Anatomy.—Drs. W. F. Peck, of Iowa, Chairman; Paul F. Eve, of Tennessee, Secretary.

Obstetrics.—Drs. J. K. Bartlett, of Wisconsin, Chairman; G. A. Moses, of Missouri, Secretary.

Medical Jurisprudence and State Medicine.—Drs. Foster Pratt, of Michigan, Chairman; Thomas L. Neal, of Ohio, Secretary.

Ophthalmology, Otology, and Laryngology.—Drs. A. W. Calhoun, of Georgia, Chairman; Carl Seiler, of Pennsylvania, Secretary.

Diseases of Children.—Drs. R. Blount, of Indiana, Chairman; J. H. Sears, of Texas, Secretary.

Dentistry.—Drs. D. H. Goodwillie, of New York, Chairman; T. W. Brophy, of Illinois, Secretary.

The report was accepted and unanimously adopted.

TRUSTEES OF THE JOURNAL.

DR. L. A. SAYRE, of New York, in presenting the report of the Committee to Nominate Trustees for the Journal, said that the duty of the Committee in selecting a Board of Trustees was a very important one; that in making the selection the Committee had been hampered by the resolution passed on Thursday, to the effect that non-attending members were not eligible, as some of the oldest and ablest members of the Association were unable to be present at this session.

The Trustees appointed by the Committee were as follows:

For three years—Drs. Davis, of Chicago; Moore, of New York, and Toner, of Washington.

For two years—Drs. H. F. Campbell, of Georgia; Packard, of Pennsylvania, and Connor, of Michigan.

For one year—Drs. Hooper, of Arkansas; Garcelon, of Maine, and McMurtry, of Kentucky.

The following resolution was offered by direction of the Section of Ophthalmology, Laryngology, and Otology, with reference to

TESTS FOR COLOR BLINDNESS.

Whereas, A petition has been presented to Congress asking for the calling of an International Commission to consider and agree upon some standard requirements of these qualifications in the sailors of all countries; therefore

Resolved, That the American Medical Association heartily approves of the proposed International Commission, and hereby directs its Secretary to transmit its action to Congress.

AMENDMENTS TO THE CONSTITUTION.

DR. FOSTER PRATT, of Michigan, gave notice of the following amendment to Article XIII. of By-Laws, so that it shall read: "None but members present shall be eligible for election as President, Vice-President, Treasurer, Secretary, Chairman, and Secretary of Sections, and as members of the Judicial Council."

BIENNIAL MEETINGS IN WASHINGTON.

DR. N. S. DAVIS, of Illinois, introduced the following:

Resolved, That after the next annual meeting the permanent interests and influence of this Association would be best promoted by again holding every second meeting in Washington, as its home on common national ground, and not as invited guests, while each alternate meeting should be held in such section of the Union as would be most useful in promoting the society organizations in all parts of the country.

Being an amendment to the Constitution, this was laid over.

DR. KELLER, of Arkansas, gave notice of another amendment as regards

THE TIME OF MEETING.

"The Nominating Committee in naming the time of meeting shall appoint any date at their discretion as late as the first Tuesday in September."

Notice was also given that an amendment would be offered at the next meeting making the office of Librarian permanent.

DR. TONER gave notice that at Cleveland he would introduce a motion that the Nominating Committee shall be authorized to name a candidate for Secretary of the Association.

DR. BRODIE, of Michigan, read an elaborate vote of thanks to the Committee of Arrangements, the profession and citizens of St. Paul, and railroads, for courtesies extended, which was seconded by Dr. N. S. Davis, of Chicago.

DR. D. H. GOODWILLIE, of New York, delivered the *Address in Dental Surgery*.

DELEGATES TO FOREIGN SOCIETIES.

The PRESIDENT then announced the following as delegates to the foreign societies: Drs. T. A. Emmett, D. Lewis, W. M. Carpenter, and E. M. Brush, of New York; and J. M. Da Costa, of Pennsylvania.

THE PRESIDENT ELECT.

On motion Dr. Davis, of Chicago, was appointed to escort Dr. John L. Atlee, the president elect, to the platform. Dr. Atlee was greeted with loud applause, and on being introduced by President Hooper, made the following address:

Gentlemen of the American Medical Association: It is with no ordinary emotions that, by your partiality, I occupy a chair that I have seen filled by a Chapman, a Warren, a Storer, a Knight, and a host of worthies, living and dead, who were and are the ornaments of our profession. I beg you to accept, gentlemen, my heartfelt thanks for the honor you have conferred upon me. I accept it also with gratitude as a tribute to the memory of a dear brother, who, were he now living, would more deservedly occupy this position. My chief motive in coming here on this occasion was to assist in carrying out the instructions unamiously given by the Lancaster County Medical Society to uphold the honor and dignity of our noble profession by putting the seal of condemnation upon the recent action of a State society, the sanction of which would have given character to a system of practice derogatory to common sense, and professional integrity. All honor, gentlemen, to the report of our Judicial Council. In the performance of my duties I shall endeavor to be firm and impartial and I trust that I may be supported by your kindness and courtesy in trying to uphold the right.

The thanks of the Association were tendered to Dr. P. O. Hooper, of Arkansas, the retiring President, and at 12.40 P. M., the Association adjourned to meet at Cleveland on the first Tuesday in June, 1883.

SECTION ON PRACTICE OF MEDICINE, MATERIA MEDICA, AND PHYSIOLOGY.

TUESDAY, JUNE 6.—The Section met at the Opera House at 3 P.M., and was called to order by the Chairman, DR. J. A. OCTERLONY, of Louisville.

The Secretary being absent, DR. T. N. REYNOLDS, of Detroit, was elected to fill the vacancy.

The Secretary read a paper on *Home Treatment of Pulmonary Consumption, by General and Local Antisepsis on the Basis of Strict Individualization*, by Dr. J. Hilgard Tyndale, of New York. On motion, the paper was referred back to the author.

DR. JOHN V. SHOEMAKER, of Philadelphia, read a paper on the *Therapeutic Action of Chlorate of Potassium*. Referred to the Committee on Publication.

WEDNESDAY, JUNE 7.—Dr. J. C. Tucker, of San Francisco, presented a paper by Dr. H. Gibbons, of California, on the *Medicinal Astringent Plants of the Pacific Coast*. Referred to the Committee on Publication.

DR. J. V. SHOEMAKER, of Philadelphia, presented a paper on the *Treatment of Syphilis with Subcutaneous Sublimate Injections*. Referred to the Committee on Publication.

THURSDAY, JUNE 8.—DR. M. DONNELLY, of New York, read a paper on *Salicylate of Potassa and its Use in Acute Rheumatism and Dyspepsia*. Referred to the Committee on Publication.

Adjourned.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

TUESDAY, JUNE 6.—The Section met at 3 P.M., DR. H. O. MARCY, of Massachusetts, in the Chair.

DR. WM. H. GRANGER, of East Boston, presented a paper on the *Mechanical Treatment of Delivery from the Superior Strait*.

DR. BEVERLY COLE, of San Francisco, read a paper on the *Forceps and their Application, Introducing a New Instrument, etc.* He said that he was a follower of the old school of obstetricians, and was not yet a convert to the new school, as represented by Playfair and others, who teach that the forceps must in all cases, whether at the *superior* strait or lower, be applied with reference to the axis of these straits, utterly ignoring the importance of the child's head. Dr. Cole recognized the *practicability* and necessity of applying the instrument to the sides of the child's head.

It was in this mode of applying the forceps only that we could be assured against having them slip. The instrument exhibited differed materially from any other extant; whilst exceedingly simple it fulfilled the indications more completely than any other. The fenestrum of each blade is large at the heel, like the Hodge forceps, in which there is an advantage, since the amount of scalp tissue protruding is so great as to fix the blade and absolutely prevent its riding on the parietal face, which Elliott's, and others, with a conical-shaped fenestrum, always will do. The shank of this instrument is very much curved, so as to facilitate its application at the superior strait without pressing upon the perineum, which the straight shank will do, thus sparing the woman much unnecessary suffering, and aiding the operator greatly. To this curve he applies

the term *perineal curve*. The entire instrument weighs but fourteen ounces.

He next criticised Dr. Tarnier's views and instrument, pointing out the defects in his teachings and the faults of his forceps. It is too clumsy, weighs too much, is difficult of application, too complicated in construction, and will slip when applied, as it usually is, namely, so as not to injure the child. Therefore, to avoid slipping, the child is exposed to too much pressure, endangering its life. But, as Budin and Tarnier, and their followers abroad and at home, believe, there has been a great advance made through this forceps. Dr. Cole has made an attachment to his forceps which fully carries out Tarnier's idea. This attachment is exceedingly simple, and is so arranged that by touching a spring it is fixed to the shank of the forceps, and by depressing the rachet it is as easily detached. Thus the whole instrument is a *multum in parvo*, furnishing two in one.

Whilst Dr. Cole utterly fails to appreciate the importance or even the admissibility of the attachment converting it into a Tarnier forceps, nevertheless, he has very ingeniously arranged this attachment so as to adapt it to the use of the converts to Tarnier.

In the discussion which followed the reading of this paper, Dr. Battey, of Georgia, and others, endorsed the views of Dr. Cole as to the principles concerned in the application, and expressed themselves as highly pleased with the forceps exhibited, believing that they completely fulfilled the indications pointed out.

Although Dr. P. J. Murphy, of Washington, was unavoidably absent, the subject of his paper, *The Condition of the Cervix Uteri after Emmet's Operation, Especially its Effects upon Subsequent Gestation and Delivery*, was taken up and freely discussed by the members.

WEDNESDAY, JUNE 7.—DR. M. GREELY PARKER, of Lowell, Mass., described a *New Thermo-Cautery*.

DR. DANIEL T. NELSON, of Chicago, Ill., read a paper on the *Sub-involution of the Uterus*, and

DR. ROBERT BATTEY narrated the *Year's Progress of Oöphorectomy*.

THURSDAY, JUNE 8.—PROF. DUNSTER, of Ann Arbor, read a paper entitled *Ovariotomy during Peritonitis; Is it Justifiable?*

DR. H. F. CAMPBELL, of Georgia, reported a case of *Impacted Retroversion of the Uterus*.

DR. H. O. MARCY, of Boston, read a paper on the *Treatment of Fibroid Tumors of the Uterus*, which elicited considerable discussion.

The Section then adjourned.

SECTION ON OPHTHALMOLOGY, OTOLOGY, AND LARYNGOLOGY.

TUESDAY, JUNE 6.—In the absence of the chairman, Dr. S. B. St. John Roosa, of New York, the SECRETARY, DR. J. SOLIS COHEN, of Philadelphia, called the meeting to order, and on motion, DR. S. B. JONES, of Chicago, was elected CHAIRMAN. At his own request, Dr. Cohen was excused from his duties as secretary, and DR. CARL SEILER, of Philadelphia, was chosen to act as SECRETARY.

DR. W. PORTER, of St. Louis, then read a paper on *Recurrent Pharyngeal Hemorrhage*, in which he reported two cases, in each of which there was evidence of incipient phthisis. When hemorrhage appeared, it was thought to have its source in the lung lesion. The bleeding was slight but frequent, and examination being made during an attack, blood was found trickling down the posterior pharyngeal wall. In the first case the origin was behind the upper part of the left tonsil, which was to some extent enlarged. A styptic application, and afterward removal of the projecting portion of the tonsil and astringents to the surrounding tissue, constituted the treatment.

In the second case a deep ulcer was found on the posterior wall of the velum, which bled freely when touched. This yielded to such applications as were made. There has been no return of hemorrhage in either instance, and this, with the fact that the source of the bleeding was not in the lung, has greatly relieved the fears of the patient regarding the progressive nature of the pulmonary disease. Hæmoptysis, seldom dangerous, and to some degree, in certain cases, productive of good, is always alarming to the patient. A fair deduction from these histories is that in all cases of supposed hæmoptysis the larynx and pharynx should be examined, especially if the pulmonary disease be incipient. If there be no physical evidence of lung disease, such an examination is all the more important. In each of these cases the chest condition was such as to warrant the earlier diagnosis had not the pharyngeal injury been discovered.

A great amount of ulceration is not necessary in order that hemorrhage should follow. In the first case probably there was only infarction of a small blood-vessel as the primary lesion. Hartman and others have demonstrated laryngeal hemorrhage, and there is evidence to prove the occurrence of pharyngeal hemorrhage, and under such circumstances as to resemble hæmoptysis.

DR. CARL SEILER, of Philadelphia, said that he had seen three cases of bleeding from the upper pharynx and naso-pharynx, which had been mistaken by others and by the patient himself for hemorrhage from the lungs.

DR. CARPENTER, of Pottsville, also related a case of pharyngeal bleeding, which was easily controlled by local applications to the bleeding point.

DR. GLASGOW, of St. Louis, said that he had never seen a case of real pharyngeal bleeding, and that all the cases mentioned, except two, had been cases of bleeding from the naso-pharynx. He could readily imagine, however, that pharyngeal bleeding might occur in phthisical subjects caused by a breaking down of the vessels by fatty degeneration.

The paper was referred to the Committee on Publication.

DR. X. C. SCOTT, of Cleveland, then made some remarks on the *Use of Powdered Iodoform in the Treatment of Diphtheritic Conjunctivitis*, and stated that since he had adopted this method of treatment he had not lost a case. He applied iodoform in fine powder to the surface once a day.

DR. PORTER said that he had had a case of syphilitic ulceration of the skin of the nose, which would not heal under the ordinary treatment, but which in the course of ten days had entirely disappeared on the local use of iodoform.

DR. SCOTT said he had brought the matter up because he wanted to hear the opinions of the members on the subject, and asked whether iodoform had ever been used for the treatment of diphtheria in the throat.

Some of the members present had heard of its being used in diphtheria.

DR. GEBBITS said he had used iodoform by insufflation for the treatment of ulcerations in the throat, and that he was in the habit of adding some ethereal oil to the drug in order to disguise the unpleasant odor.

DR. SEILER said that he had tried every imaginable substance for the purpose of destroying the odor of iodoform, and had found that there was nothing known which would do so permanently. On that account he had been obliged to discontinue its use in private practice, although he thought it one of the most valuable drugs in the treatment of ulcerations of the mucous membrane. In illustration, he related a case of tuber-

cular ulceration of the larynx and soft palate, which had improved remarkably under the local use of powdered iodoform.

DR. GLASGOW stated that his experience fully coincided with that of Dr. Seiler.

The different methods of applying the drug were then discussed, and in this discussion DR. JOHNSON, of Peoria, said that he was in the habit of dissolving the iodoform in ether and of applying the vapor to the affected mucous membrane. DR. COHEN said he had used solutions of iodoform in chloroform or ether in the form of a spray, and also dissolved in collodion, as an external application in recent goitre cases with great benefit.

DR. CARPENTER, of Pottsville, Pa., said: It is a period of nine or ten years since I have been observing the treatment of exophthalmic goitre by internal administration of iodoform, and have used it in every case that has come under my notice, with, so far, highly gratifying results. It has not seemed necessary in this variety of goitre to make an external application of the drug. It has been sufficient to administer a pill containing two or three grains of iodoform, three times a day, until marked relief is obtained. If necessary, the dose may be increased. A good form of the pill is the sugar or gelatine coated, and it may be combined with iron. By this means alone I have cured several cases of exophthalmic goitre, no matter how grave they might be, when uncomplicated by other disease.

Having communicated this treatment to Prof. Wm. Pepper, of the University of Pennsylvania, and to Dr. J. Solis Cohen, of Philadelphia, I am gratified to know that it has in their hands been found successful.

The action of this drug I believe to be sedative and tonic upon the sympathetic nervous system, and to act chiefly in that way in the process of curing exophthalmic goitre.

The constitutional effects of the iodine do not seem to me to be the efficient agent in bringing about the happy result.

DR. GLASGOW said he had treated cases of old goitre and also of other glandular tumors of the neck by the external application of iodoform, with excellent results.

DR. THOURON asked whether the drug acted through the nervous system, and if so, the external application must act upon the peripheral nerves.

DR. COHEN thought it acted as an anæsthetic upon the mucous membrane when locally applied. Internally, it acted as Dr. Carpenter had stated; but he would like to ask, whether it was safe to administer iodoform internally to a pregnant woman.

DR. CARPENTER stated that he had given the drug to a pregnant woman, with the same results as he had observed in other cases.

DR. SCOTT said he had used iodoform, together with hot water, in interstitial choroiditis, with excellent results.

DR. COHEN called attention to the Leiter apparatus for applying hot or cold water to the different organs, and said he had found it a very useful apparatus. This called forth a lengthy expression of opinions, as to the best methods of applying hot or cold water, by most of the members present.

DR. SEILER then stated that he, having seen a notice in one of the journals of a method discovered by Prof. Rossbach for anæsthetizing the larynx, had tried the ether spray on each side of the neck, until a portion of skin the size of a silver dollar had been frozen, and had found that the larynx, which previously had been absolutely intolerant to the introduction of an instrument had become quite insensible to the presence of the forceps.

DR. COHEN stated that two of his young assistants at the Throat Dispensary had tried the experiment, but had failed to obtain satisfactory results.

WEDNESDAY, JUNE 7.—Meeting was called to order at 3 P. M. After reading of the minutes of the previous meeting, a letter from Dr. Joy Jeffries, of Boston, was read, in which he asked the co-operation of the section in bringing about legislation in the matter of color blindness in signaling men on railroads, navigation, etc.

The paper on the programme not having come to hand, and its author not being present, DR. CARL SEILER, of Philadelphia, exhibited some *galvano-cautery instruments* for operations in the larynx, pharynx, and nasal cavities. He said that the insulating material, usually silk, protecting the conducting wires, was very apt to be burned off by the heat developed in the wires, and then the parts not to be cauterized were apt to be scorched, giving rise to unpleasant consequences. He had substituted vulcanized fibre for the silk, and had found it to answer the purpose admirably. In order to be able to bend the instrument to any desired curve, the insulating material was made in sections small enough to allow the wires to be bent in any shape desired,

DR. JOHNSON, of Chicago, said he had found the same difficulty as had Dr. Seiler, especially when the wires were thin, which was necessary in knives employed in operations within the nose and larynx.

DR. CALHOUN, of Atlanta, reported a case of *Accidental Vaccination of the Eye*, occurring in a little boy seven years of age, who getting some virus on his fingers from a pustule on the arm of his little sister, scratched himself on various portions of the body and on the left eye, thus inoculating himself. The pustule on the eye developed upon the edge of the lower lid, involving the conjunctiva, and ran its regular course, destroying the cornea, either by pressure or by the ulcerative process induced by the virus. The other eye also became inoculated, but did not develop a pustule, the virus producing a suppurative ophthalmia.

DR. JOHNSON, of Peoria, reported a case of *Dislocation of the Lens under the Conjunctiva* from traumatic source, and stated that after removing the lens the chamber became filled with blood, and losing sight of the patient he was not able to say whether this had become absorbed and light was admitted to the retina.

DR. CONNOR, of Detroit, reported a case of *Tumor on the Base of the Skull*. The symptoms first noticed by the patient were increasing deafness in the right ear until complete insensibility to sound was reached, then the eye on the same side began to show signs of insensibility to light, also progressive until sight was entirely lost. There were no other symptoms except a general wasting of the body. After death a large tumor was found occupying the base of the skull, which was firm and hard, with a nodular surface. This tumor by pressure had absorbed the portion of brain matter in immediate contact with it as far up as the optic thalamus, which was destroyed. Dr. Connor believed the tumor to be a chondroma, but was not certain, as he had not had an opportunity to make a microscopical examination.

DR. AGNEW, of New York, then made some remarks on *Optic Neuritis and Retinitis*, giving the histories of a number of cases. In the course of his remarks he expressed it as his opinion that specialists were apt to be one-sided and place too much reliance upon the verdict of their instruments of diagnosis and precision, thus overlooking the importance of reaching for the often remote causes of disease of special organs.

He also called attention to the matter of communicable diseases of the eye in residential schools, and cited, as an illustration, the case of a school near the city of New York, in which, on account of insufficient

food and sanitary regulations, over 300 children had been attacked by catarrhal conjunctivitis, in several of which the eyes had been destroyed.

The chair then expressed the appreciation of the members of the section, of the remarks made by Dr. Agnew.

DR. JOHNSON, of Chicago, then related a case of *Paralysis of the Abductor Muscles of the Larynx following Diphtheria*, and after the healing of the tracheotomy wound, and said that he had never heard of a similar case.

DR. SEILER said that he was not aware of the existence of any case of paralysis following diphtheria in literature, nor had he ever seen one himself. He had, however, met with a number of cases in which traumatic injury had produced the paralysis, and one case in which lead-poisoning had been the cause. He thought that perhaps inflammatory infiltration from extension of the tracheal inflammation due to the operation and irritation of the tracheal tube, might cause the paralysis, but he did think it was due to the diphtheritic poison.

DR. YOUNG, of Iowa, then made a motion to make the matter of communicable diseases of the eye the subject for discussion at the next session of the Section.

THURSDAY, JUNE 8th.—DR. TURNBULL presented a paper *On the Hearing in Children*, which was read by title and referred to the Publication Committee.

DR. SEILER made a verbal communication relating a case of *Large Fibroid Polypus* in a girl sixteen years of age. The tumor had been removed partially a year previously, but had rapidly reappeared. When he saw the case the left nostril was entirely filled with the polypoid mass, and the rhinoscope revealed a large nodulated tumor, appearing to the eye and touch like an enchondroma, in the post nasal cavity. The tumor was removed through the post nasal opening, by the Jarvis' wire snare, and proved to be a fibroma containing cartilaginous nodules. It had grown from the upper portion of the vomer, hanging by a slender pedicle.

DR. H. G. YOUNG then opened the discussion on communicable eye disease, calling attention to the difference of opinion held by authors as regards treatment, and to the necessity of proper sanitary measures to prevent the spreading of such diseases in crowded schools and tenement houses.

DR. HAZEN, of Iowa, spoke of the treatment of chronic trachoma by sulphate of copper in preference to nitrate of silver.

DR. YOUNG approved of sulphate of copper when properly and systematically applied.

DR. SMYTH, of Michigan, advocated the hot-water treatment, applied by a bottle, for an hour, twice a day.

DR. JOHNSON, of Peoria, spoke of the treatment of acute conjunctivitis, recommending the mildest applications, such as boracic acid, 6–10 grains to f℥j, to which he is in the habit of adding two drops of tr. iodine. In his opinion, purulent ophthalmias are, as a rule, treated too heroically, and recommended mild measures in this affection also. In the more chronic cases he uses the mercuric bichloride in solution; he also uses a saturated solution of sodium chloride, with tannic acid and glycerine. When trachoma has been developed, he applies the spray of hot or cold water, for eight to ten minutes, to the tract. Then he uses the solid nitrate of silver.

DR. CONNOR, of Detroit, thought that every one should contribute his experience on the subject under discussion. In his opinion, the general public should be better enlightened as to the dangers resulting from neglect of acute eye diseases, and that this study was too much neglected by the profession.

DR. JONES, of Chicago, agreed with Dr. Connor, and thought that the highest calling of the physician would be to instruct the people as regards the danger of inoculation by discharges from the eye, especially in overcrowded dwellings, schools, barracks, etc.

DR. JOHNSON, of Peoria, thought it would be difficult to teach the general public, as they would learn only by personal and disastrous experience.

DR. DYER, of Pittsburg, concurred with Dr. Johnson as to the importance of bringing the matter to the attention of the general public, and offered the following resolution:

Resolved, That a committee of three be appointed to consult as to the best means of bringing reliable information before the public, with a view of preventing the spread of communicable eye diseases.

Carried.

The Chair then appointed Dr. Jones, of Chicago; Dr. Dyer, of Pittsburg; and Dr. Connor, of Detroit, as the committee, to report at the next meeting.

The session then, on motion, adjourned *sine die*.

AMERICAN SURGICAL ASSOCIATION.

Third Annual Session, held in Philadelphia, May 31, June 1 and 2, 1882.

(Specially reported for THE MEDICAL NEWS.)

(*Concluded from p. 642.*)

TREATMENT OF FRACTURE OF THE PATELLA.

AFTERNOON SESSION. DR. THOMAS G. MORTON said that in 1873, after having always used the usual methods with unsatisfactory results, it occurred to him to try an old pair of Malgaigne's hooks, which had been brought from Europe, upon a patient in the Pennsylvania Hospital. To his pleasure he got what he believed to be bony union. Since then he had used the same and some modifications of them in a number of cases. He showed a pair of hooks which were so constructed that the two upper or two lower could be made to approach or recede from each other. His plan was never to put the hooks on before the fourth day. He first applied lead water and laudanum, elevated the limb, perhaps used gentle compression, until the effusion and swelling were reduced, and then etherized the patient and put in the hooks, applying a splint for 24 hours, just to keep the patient still till he got a little used to the hooks. He has seen no good from keeping the hooks in over 16 or 18 days. He has never seen any trouble whatever follow the use of them; of course he would not pretend that this method was applicable to all cases of fracture of the patella. In comminuted fractures, for example, they could not be used. Again, if approximation can be secured by slight pressure of the fingers, there is no need to use the hooks; but when the separation of the fragment is wide, say an inch and a half to two inches, then they may be used with advantage.

DR. W. A. BYRD, of Quincy, Ill., thought much milder means will usually do as much good. The last fracture of the patella he saw he treated with Martin's rubber bandage, placed over a posterior splint in the manner of a figure 8. He did not have to aspirate the joint (as he usually does), and all went well. The man got bony union. If you pad the splint well, so as not to irritate the flexor muscles, you will get a good result.

DR. LEVIS, in concluding the discussion, reverted again to the fact that there are no real points or ridges on the patella to which to apply pressure, and they must be obtained at the expense of the normal relation of the parts, by putting pressure upon the soft structures, and thereby putting the muscles inserted in the patella upon a strain. As to danger, it is impossible to penetrate the joints with these hooks. The trouble is to get them well into the bone. As to the time of applying, he never does it as soon as Dr.

Morton. He waits till after ten days, because then effusion has subsided. Anæsthetics are not needed on account of the pain of their insertion, but they lessen the spasm of the muscles and permit better approximation. When separation of fragments is great, there must almost always be a rupture of the bursa patellæ. As to the dressing, he uses no bandage or dressing whatever. The body may be raised a little, so as to relax the rectus muscle. He usually puts a little charpie or oakum around the hooks; in this way he gets bony union, or what is just as good. If the cases shown are not examples of this, it is impossible to detect any separation between the original fragments.

DISCUSSION ON DR. MOORE'S SPECIMEN.

DR. J. EWING MEARS, of Philadelphia, said Dr. Moore had in his paper raised the question of false joints after subcutaneous osteotomy. Some years ago he did such an operation for pain in consequence of old luxation of the humerus. The patient was entirely relieved from pain, but died a year subsequently, when he had opportunity to make a post-mortem, and found no false joint, but bony union at an obtuse angle. The result obtained in Dr. Moore's case and his own tends to show the difficulty of obtaining false joints.

DR. MOORE narrated a case of a boy upon whom he had divided the neck of the femur, whose physician put him on a tricycle to keep up motion; and, so far from effecting this, the bone reunited firmly, and the advantage of good position, which the operation had secured, was lost.

DR. J. R. WEIST, of Richmond, Indiana, read a paper on

FOREIGN BODIES IN THE AIR PASSAGES.

This paper was statistical, and contained generalizations from over one thousand cases which he had collected. The conclusions to which he had been led differed from those of most text-books, but were founded upon a careful comparison of the results obtained by prompt surgical interference and those which followed spontaneous expulsion. His conclusions were:

1. When a foreign body is lodged either in the larynx, trachea, or bronchia, the use of emetics, errhines, or similar means should not be employed, as they increase the sufferings of the patient, and do not increase his chances of recovery.

2. Inversion of the body and succussion, though sometimes useful, are dangerous, and should not be practised unless the windpipe has been previously opened.

3. The presence simply of a foreign body in the larynx, trachea, or bronchia, does not make bronchotomy necessary.

4. While a foreign body causes no dangerous symptoms, bronchotomy should not be performed.

5. While a foreign body remains fixed in the trachea or bronchia, as a general rule, bronchotomy should not be practised.

6. When symptoms of suffocation are present, or occur at frequent intervals, bronchotomy should be resorted to without delay.

7. When the foreign body is lodged in the larynx, there being no paroxysms of strangulation, but an increasing difficulty of respiration from œdema or inflammation, bronchotomy is demanded.

8. When the body is movable in the trachea, and excites frequent attacks of strangulation, bronchotomy should be performed.

DR. MEARS told of a case where he had been removing a tongue, and an assistant let a sponge, which was not firmly enough attached to a probang, drop into the patient's larynx. He opened the trachea at once—not by dissection, but by plunging the knife boldly into the trachea. He also narrated some particulars of a case which had been under treatment for serious pulmonary disease. The boy was one day swinging, when he fell out upon his face on the ground, where a penny was found which he had then expelled from his lung. After this all the symptoms gradually disappeared and the patient got well. He also told of a case in which a distinguished surgeon operated, and the instant the trachea was opened a coin was expelled from the wound.

DR. W. T. BRIGGS, of Nashville, then read a paper on

THE ANTISEPTIC TREATMENT OF WOUNDS AFTER OPERATIONS AND INJURIES.

After a review of the germ theory and coming to the conclusion that this is not established, he laid stress upon the distinction between antiseptic surgery and Listerism. As was said at the International Medical Congress of 1881, all good surgery is antiseptic: he wished it could also be said that all antiseptic surgery is good. The antiseptic treatment of wounds after operations and injuries is not limited to Listerism or any other special method, but is based upon broad general principles, and the use of carbolic acid has other effects than those of an antizymotic. Antiseptic surgery embraces every condition or agent that tends to prevent putrefactive changes in wounds, or to remove or neutralize the evil effects of such changes when they have occurred. The antiseptic treatment of wounds, properly considered, consists, first, of such means as will restrain inflammatory action within reparative bounds; and, second, of such means as will subdue excessive action, and remove or neutralize the effects of destructive inflammation. How may a surgeon confine the act of healing to an active reparative effort? To do this always is impossible; but certain precautions are of value. No patient should undergo a capital operation without a careful preparatory treatment. Every weak part of the system should be supported. If this cannot be secured, the greatest care must be taken after the operation. He would arrange that the wound should have all foreign bodies kept away from it. Cleanliness is not simply the removal of dirt; but of everything that can be injurious. Drainage and proper coaptation are of the utmost importance. Rest and control of circulation should be secured by well-regulated compression. Moderate and uniform temperature should be maintained.

When excessive inflammation does occur, all efforts must be made to restrain it. Every method good for regulating healthy action will contribute to the correction of excessive action. One method will not do for all sorts of cases, and therefore it is not necessary or useful to apply to fresh surgical wounds the same treatment as is suited to old and putrefying wounds. If such wounds are closed, they must be provided with the means of thorough drainage.

DR. E. M. MOORE said he is now making a series of experiments in regard to antiseptic surgery. All know the better results of subcutaneous surgery. Now the thing to be secured is to make such modifications as shall give to external surgery the advantages of internal, and this is what Mr. Lister also aims to do. He has performed ovariotomy four times in the following way. (He lost two of his patients, but not by peritonitis.) He passes carbonic acid gas into the place where the operation is performed, and merely preoccupies the place of the air with the carbonic acid. Thus, instead of attempting to purify the air, he preoccupied its place with carbonic acid gas. He claimed that whenever a profuse hemorrhage cleans a wound out, and a discharge of serum soaks the dressing placed over it and then dries, we have a simple but complete form of natural antiseptic dressing.

DR. H. F. CAMPBELL said he felt constrained to mention his experience and his invariable practice—whether it is because he lives in what is called a malarious district, or for some other reason, dependent on early training, he could not say. He administers quinia in all grave surgical cases until he produces cinchonism, and this he maintains for some time. He does not believe that germs provoke inflammation, and that the good effect of carbolic acid depends upon the fact that it kills them, but that inflammation and suppuration are due to reflex irritation, and that for this reason opiates often prevent inflammation, and that carbolic acid does good because it obtunds the peripheral sensibility. To his plan he attributes the fact that he has little suppuration, and very rarely such a thing as a metastatic abscess.

THIRD DAY.—FRIDAY, JUNE 2D.

THE MUSEUM AND LIBRARY OF THE SURGEON-GENERAL'S OFFICE.

DR. D. W. YANDELL, of Louisville, Ky., offered the following resolutions, which were adopted:

Whereas, The American Surgical Association, in its annual session at Philadelphia, on June 2, has learned with deep regret that the Senate Committee on Appropriations has reduced the annual appropriation for the Museum and Library of the Surgeon-General's Office from $10,000, as passed by the House of Representatives, to $5,000; therefore,

Resolved, That the President and Secretary are hereby instructed to communicate to the United States Senate the opinion of this body that such reduction would be extremely unwise, by hampering the growth of the museum and library, in which the people of the whole civilized world are deeply interested, because through these collections the knowledge of the science and art of medicine and its application to the relief and cure of disease and injury are being vastly increased and diffused for the benefit of all mankind; and that now to cripple this work which the Government has in its power to develop, by a reduction of appropriation, would be to retard the unfolding of resources to successfully combat disease and injury, and to impair the growth of an institution regarded as an enduring monument of the philanthropic liberality of the American nation.

Resolved, That these collections, which are unrivalled in their richness and usefulness, are a source of just national pride, and as they are a benefit beyond price to the whole people—for all men are subject to disease and injury—they are especially worthy of the fostering and liberal care of a Government of the people.

THE NOMINATING COMMITTEE

now made its report through its Chairman, PROF. CABELL.

At its conclusion, DR. GROSS, who had been nominated for a second term in office, arose, and, in a voice tremulous with emotion, said:

"Before this report be acted upon by the Association, I desire to offer a few remarks respecting my nomination for the office of President. While I am fully sensible of the high honor which the Committee have intended to confer upon me, by placing me at the head of their ticket, I hope and trust that they may be induced to reconsider the matter, and select some other Fellow for the position. I claim no pre-emption right to this office, and I have certainly occupied it long enough. The action of the committee is at variance with the genius of our republican institutions, and the habits of the American people. Rotation in office is, always has been, and always will be, the order of the day, not only among politicians, but among scientists and professional men. It is right it should be so, for the expectation of office is an incentive to exertion. The object of my highest ambition, as it respects this Association, has been accomplished. Its success is fully assured, and I retire from the chair, which I have occupied during the last two years, with feelings of no ordinary emotion. We have done a noble work, a work which far exceeds my most sanguine expectations, and which, if I do not greatly err, is destined to pass into history.

"The establishment of an Association which should bear a National name, and embody in one harmonious whole the surgical talent, experience, and wisdom of this great country, had long been one of the cherished objects of my ambition. No opportunity, however, of a favorable nature for carrying my design into effect occurred until the meeting of the American Medical Association, at Atlanta, in May, 1879. Calling around me three distinguished friends, Profs. Gunn, Briggs, and Dawson, all widely known as great surgeons, I disclosed to them my scheme, and succeeded at once in enlisting their hearty sympathy and support. It was agreed that on the following day, immediately after the adjournment of the surgical section of the Association, I should, in a brief speech, lay our plans before that body. This having been done, the meeting was organized by the appointment of the eminent and venerable Dr. Dugas, of Augusta, Professor of Surgery in the Medical College of Georgia, as Chairman, and Professor Dawson, of Cincinnati, as Secretary. Brief addresses were made by different gentlemen, all cordially approving of the objects of the meeting, but for reasons which need not now be mentioned, nothing further was done on that occasion. Before, however, parting with my immediate associates, it was determined that we should send a circular to the principal surgeons of the United States, setting forth our plans, and inviting their co-operation at a conference to be held at New York during the sitting of the American Medical Association in June, 1880. At this meeting Professor Sayre, on my motion, was placed in the chair, and nearly fifty gentlemen registered their names, a temporary organization being effected by the adoption of a constitution and the election of officers. I had the honor to be put at the head of the list. Professor Dugas was elected first Vice-President, and the late lamented Professor James R. Wood, second Vice-President. The next meeting, one also wholly of an executive nature, took place at Richmond, Virginia, in May, 1881, at which it was resolved that the first regular meeting for the transaction of scientific and practical work should be held at Coney Island the following September. Although this meeting was slimly attended, it performed useful work, and laid the foundation of the present meeting, which has eventuated in such a triumphant success.

"Thus, Mr. Chairman, it will be perceived that what promises to become, if it not already is, a great and useful, and, we hope, an enduring Society, had, like all similar enterprises, a small and humble beginning, with not a few early struggles and trials. Before I resume my seat, let me again entreat the Asssociation to withdraw my name from the list of officers."

When Dr. Gross sat down DR. D. W. YANDELL, addressing the Chair, spoke as follows: "What is writ is writ, what is done is done. When the Nominating Committee, of which I was a member, and for which I rise to speak, met, it instinctively on the instant, and unanimously, chose the venerable surgeon, who has just spoken, for the highest office, the first place in the gift of the Association. The Committee, sir, selected him as his own successor, and in doing so we felt that our action did not express the wishes of this body alone, but that it expressed the sentiment of every true man

in the profession in America. Had the Constitution of the Association conferred upon us the power, we would have put on him the royal purple, and, hailing him chief among all, have bid him wear it for life; for, having worn the sceptre, we wished that the hand which had plucked such enduring renown for home surgery should continue to wield it—a hand, the skill of which an age bordering on four-score years has not yet impaired, and the frank and cordial pressure of which no man has ever felt without feeling the better for it.

"As the founder of this Association, he opened up possibilities for surgery for which we wished to thank him.

"As the father of modern American surgery, we wished, as dutiful children, to convey to him in our report some idea of the respect and reverence we felt for him personally, no less than our appreciation of his labors in the science which he has done so much to create, to enlarge, to illustrate and adorn, and of which to-day he is so complete an embodiment. And in what we did, Mr. Chairman, we felt that we were uttering the sentiment not of the profession of this country alone, but that in tendering him fresh honors, the action would be approved by workers in surgery throughout all the world.

"Sir, the deeds of this our Fellow, whose name is now again offered you for the presidency, are great deeds, and 'great deeds cannot die. They, like the sun and moon, renew their light forever.' And we have all been blessed by looking on those of him whose term of office having first expired, we now propose again to renew.

"We are fully aware that, did Dr. Gross consult his own wishes, he would, on laying down the cares of office, not willingly resume them. But he must, in this case, yield his wishes to ours; for the united desire of the profession to which he has given his undivided life possesses, let us believe, the force of a command. Ordinarily, fathers direct their children. Here the children, through love, command the father. In this spirit, then, the Committee cannot allow Dr. Gross to decline the office which they have laid at his feet. And in a career of unsurpassed usefulness and of unequalled splendor, crowned both at home and abroad by every possible honor, the Association would fain believe that this, though the most recent, tribute to his worth shall not be esteemed by him to be the least.

"In conclusion, the Committee, acting for the Association, and speaking for the profession at large in the United States, not only declines to withdraw the name of our beloved founder, but begs here to declare that he is unanimously again chosen President of the American Surgical Association."

The following officers were then elected to serve for the ensuing year: *President*, Prof. S. D. Gross, of Philadelphia; *Vice-Presidents*, Dr. E. M. Moore, of Rochester, N. Y.; and Prof. Moses Gunn, of Chicago; *Secretary*, Dr. J. R. Weist, of Richmond, Ind.; *Treasurer*, Dr. John H. Packard, of Philadelphia; *Recorder*, Dr. J. Ewing Mears, of Philadelphia; *Council*, Dr. R. Beverly Cole, of San Francisco, to serve for one year; Dr. George W. Gay, of Boston, for two years; Dr. H. F. Campbell, of Augusta, Ga., for three years; and Dr. Hunter McGuire, of Richmond, Va., for four years.

REMOVAL OF BREAST FOR CANCER.

DR. S. W. GROSS exhibited four patients from whom he had removed the mammary gland on account of carcinoma. His object in bringing the cases before the Association was to demonstrate the condition of the cicatrices at various periods of the operation; as it had been theoretically urged at a former meeting that the thorough operations practised by him might be followed by morbid conditions of the cicatricial tissue.

Case I.—In the first patient the cicatrice is soft, mobile, of a natural tint, and hardly an inch in width. The entire breast, with its coverings, the pectoral fascia, and a mass of axillary glands were removed on the 4th of September, 1878. Forty-five months have elapsed since the operation, and there is not the slightest evidence of recurrence. At the date of the operation the woman was forty-eight years of age.

Case II.—On the 6th of August, 1879, or thirty-four months ago, Dr. Gross extirpated the entire breast of a married woman thirty-nine years of age. The axillary glands, on exploration, were found to be free from involvement. The huge wound had entirely closed in thirteen weeks. The cicatrice, which is at its widest part nearly three inches broad, is soft, mobile, and free from discoloration. The disease has not recurred.

Case III.—Dr. Gross removed the entire breast and ten axillary glands from a married woman forty years of age, on the 28th of December, 1881. The breast was small, and the tumor ran from above downwards and inwards toward the nipple. The edges of the wound were united, but subsequently reopened; and the cicatrice, which is still red, is only half an inch wide. There has been no recurrence of the disease.

Case IV.—Dr. Gross removed the entire breast of a single lady forty-five years old, on the 1st of March, 1882. The axillary glands were not affected. The cicatrice is scarcely an inch wide; but, in consequence of too early and too frequent use of the corresponding arm it became the seat of several superficial excoriations. The patient is free from recurrence.

DR. J. C. HUTCHISON, of Brooklyn, then read a paper on

HIP-JOINT DISEASE,

in which he laid great stress on the importance of rigidity as an early symptom. He then recommended his method of taking off pressure from the joint by means of the weight of the limb itself, kept clear of the ground by a high-soled shoe on the sound side and crutches. As a substitute for the high shoe, Dr. Levis suggested flexing the leg of the diseased side at a right angle, so that the other foot could act more naturally. This useful suggestion the writer of the paper thought he had somewhat improved by bending the leg to an angle of 45°, and keeping it in that position by a splint made of cardboard moulded so as almost to encompass the thigh and leg, and strengthened at the back with a flat steel bar. This method he advised for all stages of hip-joint disease, except when the patient was too weak to be out of bed. Such he would treat with rest in bed, with extension by a weight and pulley.

DR. BASIL NORRIS, U. S. Army, inquired whether Dr. Hutchison recommended the splint applied to the back and thigh.

DR. HUTCHISON.—You mean Mr. Owen Thomas's splint. No; I only use the high shoe and crutches, or the splint I have just shown and crutches.

DR. DE FOREST WILLARD urged the importance of early diagnosis. The cases that go on until any one can recognize them are very hard to cure. But he has seen many cases where the disease has been recognized very early and the best results of treatment obtained. Early rigidity is pathognomonic of hip-joint disease, and wherever this is seen the little patients must be treated as if they had hip-joint disease. Then it can be cured. He advocated the use of a fixed dressing—starch, silicate of soda, plaster, or anything to fix the joint.

DR. KINLOCH doubted theoretically the advisability of flexing the leg, because then the femur would be in danger of sudden rotation by blows upon the leg.

DR. LEVIS explained that he did not insist on the flexing of the leg to a right angle. Any flexure which would prevent its touching the ground in walking would suffice.

DR. HUTCHISON, in closing the discussion, said that he had not found Dr. Willard's suggestion in regard to using a firm dressing necessary, and he did not use it for two reasons. In the first place, it did not hold the joint immovable—he had never seen an apparatus which could. In the second place, nature does this herself. The trouble is not to fix the joint, that is what nature does better than art can. By his method he has not found it necessary to use extension at night. To refer to Owen Thomas's splint, he would give his reason for objecting to it. It is a very good splint in many ways. There is none that fixes the joint better, but one who wears it can never sit down. He must either stand or lie. He cannot defecate in the natural position without removing it, and all its inconveniences outweigh, in his mind, its usefulness.

DR. H. F. CAMPBELL, of Georgia, gave a short abstract of a paper on

THE RADICAL CURE OF TRAUMATIC INFLAMMATION BY ANTIPHLOGISTIC ARTERIAL LIGATION.

He made the point that the tying of the main artery of a limb in which a destructive inflammation is taking place will check the inflammation by controlling the circulation and reducing it nearer to a healthy standard, and that in this way a limb in which all the signs of commencing gangrene are present, may be made to take on healthy action and be saved. He would not go into the matter in full, but he wanted to put the idea on record. The ligation was different from the use of the tourniquet or digital compression, because it left the venous system open for drainage. He wished to state that he had actually seen a limb, already gangrenous, in which he ligated the femoral artery at the apex of Scarpa's triangle; the second day the swelling was much reduced; the third day the sanious discharge was replaced by laudable pus, granulations were forming, and eventually the limb was saved. This case was but a type of some fifteen, of upper and lower extremities, which he had saved in this way.

He held that no hand, no forearm, no arm, no foot, no ankle, no leg, should ever be amputated for gangrene or traumatic inflammation without first considering the propriety of making an experimental ligation of the artery supplying the limb, *unless* there should be such disorganization as to make it impossible to save it.

DR. GUNN. "To cut off the only supply of the limb?"

DR. CAMPBELL. "I thank you for that question. My theory is that when a limb is swollen and turgid with blood and gangrene is threatening, it is not from too little, but from too much, blood. Cut off all but the collateral circulation and you correct the turgescence. We are instructed in this matter by the phenomena of aneurism. When we tie a main artery for a gunshot wound, we may have gangrene, because the system is unprepared; the cut-off is too sudden. But in aneurism the general conditions of the part prepare the patient for the operation. So in commencing or threatening gangrene, we have every blood-vessel swollen and dilated, and when the main artery is ligated, this cuts off only the excess of blood, leaving enough to go through the collateral circulation to nourish the limb. The effect is at once to relieve tension and put the whole in better condition. It can hardly be believed what results."

DR. BONTECOU, of Troy, N. Y. "Would not deep incisions through the deep fascia accomplish the same result?"

DR. CAMPBELL. "As far as tension alone goes, it might. The relief of tension is not the main point of my theory, but the relief of engorgement. Yet the tension in such cases is different from ordinary tension. Not only is a muscle or any other tissue tense, but every fibril, every cell, every atom, so to speak, is swollen, and no way of relieving this is so effectual as to cut off the arterial supply."

AFTERNOON SESSION.—The Secretary, Dr. Weist, read for DR. SENN, of Milwaukee, an account, and showed a specimen, of a case which he called

"INTRACAPSULAR FRACTURE OF THE NECK OF THE FEMUR, WITH BONY UNION."

The patient was 75 years old, fell upon her left trochanter, and sustained what Dr. Senn diagnosticated as an impacted fracture of the neck of the bone. The treatment consisted in placing her on her back, with sand bags applied. She went about on crutches at the end of three months, and walked without crutches and without pain at the end of a year. There was one inch shortening. Motion in joint limited. When she died, about a year after the injury, he obtained a *post mortem*, and secured the specimen submitted, in which the line of union could be traced, and the fact established that it was union after an intracapsular fracture.

DR. GUNN said that bony union after intracapsular fractures are so rare that each claimant challenges the closest scrutiny. After carefully examining the specimen presented, he could not see any evidence of the impaction, and he was satisfied that a part of the inner fragment was outside of the capsular ligament, and therefore had received other nourishment than that obtainable through the ligamentum teres. To an inquiry of the President, he replied that he had never seen a case of bony union after an intracapsular fracture of the neck of the femur, and never expected to.

THE PRESIDENT said he had never seen one, and never expected to.

DR. J. EWING MEARS then read an account of some experiments he had made with Dr. Morris Longstreth, on the

INTRAPERITONEAL METHOD OF TREATING THE PEDICLE IN OVARIOTOMY.

After speaking of the various methods of ligature, torsion, acupressure, clamping, etc., and having referred to the investigations of Spiegelberg and Waldeyer, he described some experiments he and Dr. Longstreth had made, removing the ovaries of rabbits, using ligatures of various kinds, and returning the pedicle into the abdominal cavity. The results seemed to show that catgut ligatures applied only tight enough to control the vessels stayed in place, became encapsulated, and were after awhile absorbed, without giving rise to any evidence of peritonitis. Silk ligatures resisted the disintegrating action of the tissues longer than catgut.

DR. W. A. BYRD advocated simple torsion. After the results he had seen in Guy's Hospital, he used torsion very largely, and he believed it was the best way of treating divided vessels.

DR. GUNN inquired if it would not be worth while to make some experiments with vegetable fibre.

DR. MEARS said he hoped to add this to his other experiments soon.

MISCELLANEOUS BUSINESS.

The President, Dr. Gross, then appointed Drs. Weist, Bontecou and Mears a Committee on Obituary Notices, to be read at the next meeting.

Resolutions of thanks were passed to the College of Physicians of Philadelphia for the use of their Hall, to the surgeons of Philadelphia for their social hospitality, to the exhibitors of surgical instruments, and to the Committee of Arrangements for their labors to make the session of the Association a success.

The President, Dr. Gross, after a few farewell remarks, then declared the meeting adjourned.

The next meeting will be held in Cincinnati, in May, 1883.

NOTE.—By an oversight the name of Dr. Phineas Horwitz, U. S. N., formerly Chief of Bureau of Medicine and Surgery, was omitted from the list of Honorary Fellows elected at this meeting.

NEW YORK NEUROGICAL SOCIETY.

Stated Meeting, June 6, 1882.

E. C. SPITZKA, M.D., PRESIDENT IN THE CHAIR.

DR. GRAEME M. HAMMOND exhibited an interesting case of Addison's disease, and a sister of the patient who manifested progressive muscular atrophy.

DR. V. E. BRILL communicated a detailed report of a case of *Destructive Lesion of the Cornea accompanied by Color-Blindness.*

DR. J. LEONARD CORNING then proceed to read his paper entitled

CAROTID COMPRESSION AND PHYSIOLOGICAL BRAIN REST,

which was as follows:

Mr. President and Gentlemen: It is now more than a year since, guided by certain considerations of a theoretical nature, I began a series of experimental researches, which it is my duty and privilege alike to submit to the courteous consideration of your honorable body this evening.

In a short summary published some time since, and more particularly in a monograph of more recent date, the salient features of those investigations have been alluded to at some length. It is necessary, however, in order that the considerations which constitute the base of this paper may not lack in correctiveness, to refer briefly once again to those early experiments which gave rise to the protracted series of after-investigations, upon which, in great measure, is founded the system of induction which constitutes the basis of the views to be advocated this evening.

Having observed, namely, the extreme degree of venous hyperæmia and carotid throbbing which epileptics exhibit during the attack, I could not help asking myself the question: Is there not some causative influence exercised by this engorged condition of the central nervous system upon the further continuance of the attack, and upon the persistence of the series of spasmodic phenomena which constitute the status epilepticus. Acting upon this *a priori* reflection, I determined if possible to allay the condition of cerebral engorgement, and to observe the effect thus produced upon the convulsive appearances. The best and most direct method of allaying the hyperæmic condition of the ganglia which suggested itself to me was compression of the carotids. Accordingly I compressed firmly with my thumb and finger both the carotids of an epileptic, who had but recently entered upon a series of violent paroxysms. After the lapse of about five minutes, the convulsions were entirely checked, and the patient remained in a perfectly conscious condition. The usual persistency of the status epilepticus in this case was from thirty to forty-five minutes. An interesting fact which I noted on this and many subsequent occasions was the rapid development of fulness in the radial pulse. This progressive fulness of the peripheral arteries is the usual precursor of approaching consciousness and cessation of the convulsions. Subsequently I essayed digital compression on several occasions; but soon became aware of the inherent defects of this method of executing arterial compression, which are especially evident during very violent convulsions, when, owing to the excessive spasm of the cervical muscles, it is quite impossible to exert the necessary amount of pressure. After pondering for some time the best means of overcoming this obstacle, it finally occurred to me that an instrument might be constructed which would enable the operator to employ his strength in the most advantageous manner.

The instrument, Fig. 1, for temporary compression of the carotid, which I present here this evening, is

FIG. 1.

a great improvement on the first model which I devised, and of which a description was published some time since; it is manufactured by Mr. W. F. Ford, of this city. The following brief description will give a sufficiently accurate idea of its construction. Two curved metallic armatures, to each of whose extremities is attached a pad, can, by means of a screw, provided with a detachable key, be placed at any desired angle. The object of this device is to permit of so arranging the pads that the artery is compressed away from the jugular vein, and in the direction of the spinal column. The other extremities of the curved armatures are attached to a handle by means of an Archimedian screw, which transfixes the latter in its entire length. By rotating the button, which is attached to the disengaged end of the screw, the curved armatures can be extended or approximated at will. This instrument I have repeatedly employed, and can only say that it seems to fulfill all possible indications for temporary compression.

The portion of the common carotid artery which for topographical reasons is best adapted to compression, is situated opposite a point, which is located slightly above the juncture of the thyroid with the cricoid cartilage. Compression should not be so severe as to cause entire closure of the lumina of both arteries, as by so doing general convulsions may be induced, should the connections between the vertebral and carotid systems not be sufficiently developed to meet the *sudden* and unwonted circulatory exigencies.

After convincing myself on numerous occasions that it is usually possible to arrest the convulsions peculiar

to epilepsy by temporary compression, I began a series of reflections as to the nature of epilepsy itself. It is not my purpose to discuss those considerations on this occasion even did time admit of it; they have been published elsewhere. Suffice it to say that, after mature reflection, I essayed *prolonged* compression of the carotids, with the result of preventing attacks for days and weeks—in some instances where patients were having two or three seizures every twenty-four hours. The instruments which I first devised for protracted compression were somewhat primitive, but I have continued to improve upon these early models until an instrument has been obtained which seems to fulfill all the indications.

This instrument (Fig. 2), while being simple in construction, represents a very great improvement on the truss, which I have employed with many other

FIG. 2.

mechanical devices for a year past. It consists of two semi-circular springs, one of which is provided with a longitudinal slot. Through this slot passes a screw that is securely imbedded in the periphery of the second spring, which lies directly below and in perfect apposition with the first. By sliding one over the other, the radius formed by the two springs may be increased or diminished at will, while by tightening a nut, with which the screw is provided, they may be held in any desired position. To each of the free extremities of the springs, which are united by an elastic band secured to the ends of two detachable armatures, is attached, by means of a ball-and-socket-joint, a delicate pad. The ball of this joint is fastened to a screw which can be lengthened or shortened at will. The pads can be moved to and fro by means of a short longitudinal slot, and secured in position with a screw. These anterior slots afford a fine adjustment. The region of the artery to be selected for permanent compression is precisely the same as that to be chosen in temporary compression. The pads should be so arranged that their *superior* margin is situated about opposite the juncture of the thyroid with the cricoid cartilage. (*Vide* Fig. 3.)

FIG. 3.

To the remarkably beneficial effects which carotid compression exerts on the vaso-motor mechanism, as exemplified by the great improvement which takes place in the peripheral circulation of dements and epileptics, upon the employment of this method of treatment, I have referred to in a publication of recent date. (*Vide* "Carotid Compression and Brain Rest," Randolph & Co.) It was after a protracted series of experiments with epileptics that I first conceived the idea of ascertaining the effects of carotid compression on various degrees of mental excitement. My first investigations in this direction were in connection with patients who, at the time I began my experiments, were suffering from severe maniacal excitement, and here I will briefly recount a case of this character, which I have elsewhere referred to, but which I trust may not be out of place on this occasion, as it graphically illustrates the baneful irritative effect of excessive cerebral hyperæmia on the one hand, and the benignant influence of physiological anæmia, induced by artificial tonus, applied to the carotids on the other. The case in question was that of a man who was a sufferer from a most violent and protracted attack of mania. He had slept but little for weeks, although taking large doses of hyoscyamus and chloral. This patient was violent and destructive, tearing and breaking everything within his reach. In order to adjust apparatus to this man's neck, I was obliged to have him restrained by a number of attendants; his mental and motor excitement were something frightful to contemplate. His face was much distorted and flushed, and both conjunctivæ injected. I applied compression to his carotids while he remained in a sitting posture. After the lapse of a few moments, his cries and struggles ceased, his eyelids drooped, and he began to oscillate to and fro upon his chair. In this condition he suffered himself to be led to his bed. There he remained quietly upon his back, evincing all the symptoms of drowsiness. In a shorter time than it takes to relate it, he was wrapped in slumber. This repose had all the characteristics of physiological sleep. Respiration was deep and perfectly regular. There was not the slightest cardiac irregularity or disturbance whatever. Patient continued to sleep for several hours, and when at last he awoke, appeared much refreshed. I have employed compression many times since, with the object of placing the brain in a condition favorable to sleep and rest, and with an eye to limiting ganglionic activity by controlling the degree of metamorphosis within the plasma of the cerebral substance itself. That psychical motor energy and consciousness itself are directly or ultimately dependent on the adequate magnitude of the blood supply in the brain for their maintenance, it would be the very acme of folly to deny. These facts have been repeatedly demonstrated in the operation of bilateral ligation of the carotids, in the excessive derivative depletion that has sometimes been practised with Junot's apparatus, and in cases of great loss of blood by traumatic hæmorrhage.

In the monograph referred to above, I have quoted at length Dr. Hammond's remarkable case of cranial injury. On the present occasion I am prevented by lack of time from referring to this interesting case at length. Suffice it to say, however, that Dr. Hammond observed that the scalp above an extensive cranial fissure was depressed during sleep and elevated during wakefulness, thus proving beyond the shadow of a doubt the relative anæmic condition of the brain during sleep, and the comparatively hyperæmic condition of the organ during wakefulness. As for myself, I can truly say that I have found it quite impossible to carry on any species of arduous mental exertion while my carotid arteries were compressed to any considerable degree.

The phenomena observable on augmenting more or less rapidly pressure upon the carotids are substantially as follows:

1. Facial pallor.
2. Drooping of the eyelid.
3. Decrease in rapidity of respiration.

4. Dizziness and frequently well-marked soporific tendency.

5. In very anæmic persons frequently syncope, and if compression be very severe, so that the lumina of the arteries are almost entirely closed, general convulsions may be induced.

What measure of inconstancy actually does exist, particularly in the latter symptoms of the above group of phenomena, is adequately accounted for by the well-known variability in the anastomotic connections between the vertebral and carotid systems at the circle of Willis.

More recently I have employed carotid compression in conjunction with Junod's apparatus, hot bath to the feet, and ice bags to the head and spine. I have also made some experiments with compression in conjunction with inhalations of chloroform, ether and nitrous oxide gas. On this subject I shall have something to say on a future occasion.

When compression is employed for the purpose of allaying those hyperæmic conditions of the brain, which by causing irritation prevent the occurrence of physiological sleep, great care should be taken to eliminate all sources of sensory excitation. The apartment should be carefully darkened; all discordant noises are to be carefully excluded; the monotonous ticking of a clock or metronome, however, are, as is well known, well calculated to promote rather than to dispel sleep. In this connection it is necessary to bear in mind that what is sought after in compression is not to cause stupor, but to place the ganglia in such a condition, by reason of the reduced blood-flow that a diminution of inter-plasmatic activity first becomes a possibility and finally a necessity.

If, then, it be admitted that the ganglia are directly or ultimately dependent for their functional activity on the good offices of the blood-stream, it becomes perfectly evident that *limitation of blood-supply means curtailment of ganglionic function*. When it is *furthermore* considered that those reparative processes within the ganglia themselves are best performed while the organ is in a state of comparative anæmia, I cannot repress the conviction that in carotid compression we possess the true physiological throttle-valve of psychical and motor energy. Upon the great physiological principle, then, that the extensity and intensity of ganglionic activity are ultimately dependent upon the magnitude of the blood-supply, I believe should be founded every rational system of brain rest. As a matter of course, the avowal of this conviction does not exclude the employment of sedatives, more particularly where there is a state of irritation within the ganglion cells themselves. I have myself employed carotid compression, in conjunction with *very* moderate doses of the bromides, as well as of hyoscyamus and chloral, and I have seen small doses of these drugs, which by themselves had remained ineffective, produce most excellent sedative effects when employed in conjunction with carotid compression, and herein lies a prime indication for the use of compression of the carotids. It is *not*, I believe, a procedure which is destined to displace the existing employment of certain powerful drugs. The beneficial results to be anticipated from it are, on the contrary, the possibility of curtailing the dose of certain powerful remedies, such as bromides, hyoscyamus, chloral, etc. As an antiphlogistic in the inflammatory invasions which attack the meninges, I believe that arterial compression has a future. In cerebral hæmorrhage it might prove useful. Whether it would prove useful in arresting the growth of tumors is of comparatively minor importance.

The propriety of employing compression in those functional troubles so ably described by Dr. Beard, in his work on "Neurasthenia," is self-evident. Derangement of cerebral circulation is one of the most common phenomena in these disorders, and Dr. Beard has called attention to the evidence of this morbid condition of the vaso-motor centres, where he describes the extraordinary facial flushings often present in these cases. When the intimate relationship, which congestive phenomena sustain to epilepsy, hysteria, and other neuroses, is borne in mind, and when we consider the grave circulatory derangements which are so prominent a feature in these diseases, the necessity of treating all *early* morbid circulatory derangements, before they result in profound organic changes, is evident.

DR. WM. A. HAMMOND was perfectly willing to admit that a practical point like Dr. Corning's was of more value than any amount of abstract reasoning, but he was unable to explain the efficacy of carotid compression in epilepsy, as the initial lesion in that disease was one of anæmia. Some years ago, said Dr. Hammond, I was in Rochester walking down the street with a physician who had charge of the Alms House, where they had many epileptics, and he said he stopped their fits by putting a rubber band about their necks. His theory was that the beneficial results were due to compression of the veins. I tried it in one case with good result. Dr. Corning comes to us with an exactly opposite theory, and with admirably constructed instruments for carrying it out. I shall certainly try them in view of the practical results he has already obtained by their use.

DR. PETERS thought that compression of the carotids could avail but little, when, as was known in epilepsy, there was universal spasm of the arteries of the brain.

DR. LOUDON CARTER GRAY called attention to the experiments of Volk, who in a number of cases of epilepsy in the lower animals was unable to find any constant vascular condition of the brain during life. Of course instruments like those of Dr. Corning's might do temporary good to unstable cells, but as to their curing epilepsy, or permanently effecting the condition of these cells, he thought it was one of the metaphysics of neurology.

DR. G. M. HAMMOND, having read Dr. Corning's monograph on "Carotid Compression and Brain Rest," was prompted to try temporary compression in a case of corea occurring in a girl thirteen years of age; the result was entirely satisfactory.

DR. M. JOSIAH ROBERTS had become somewhat familiar with Dr. Corning's ideas through repeated conversations with him, and had made use of digital and instrumental temporary compression of the carotids in a number of instances. His first patient was one who had been suffering severely from an intense throbbing headache for more than seven hours. Her face was flushed, conjunctivæ injected, and tears stood in her eyes. It was in fact a very severe case of congestive headache. With one of Dr. Corning's earlier instruments he made firm pressure over both carotid arteries for forty-five seconds, when the patient declared her headache had entirely ceased. One week later she reported that there had been no re-occurrence of the trouble. The next case in which he tried it was one of old-fashioned tic douleureux of six years' standing. He firmly compressed both carotids for more than ten minutes, but without the slightest amelioration of pain. He had also used instrumental compression in epistaxis when occurring idiopathically and in consequence of surgical operations upon the anterior nares, and with the happiest results. On one occasion, when suffering from a severe congestive headache, Dr. Roberts applied to his neck one of Dr. Corning's carotid truss, and used it in conjunction with a hot foot bath. At the expiration of about ten minutes the pain in his head had nearly abated. Feeling drowsy, he removed the truss, laid it by his pillow, and fell asleep. In the

morning he awoke refreshed and without a head symptom. Dr. Roberts had used digital compression of the carotids as an adjuvant to etherization in twelve cases. It appeared to hasten the process. He could not say whether less ether was required. Forcible compression was of undoubted service in quieting the patient during the stage of excitement.

As an euthanasia, Dr. Roberts had made use of digital compression of the carotids in one instance. Being called to the bedside of a hemiplegic child, of three and a half years, who was writhing in convulsions, who had for more than two years been a great sufferer, and whose death was inevitable within the course of a few hours; he compressed very gently both carotids, when the convulsions immediately ceased. Just previous to this procedure he had obtained a similar effect by causing the child to inhale small quantities of chloroform. Upon removal of the fingers the convulsions returned. They would cease again by compression of either the right or the left carotid, or both together. Having determined this much, he gently compressed both carotids for about five minutes, when the child without struggle or sign of pain ceased to breath. An over-excitable and nervous mother was thus spared the pain of seeing her child die amid agonizing convulsions. When she thinks of those last moments, the picture of a horrible death will not present itself to her mind, but it will be that of an innocent child passing away in a state of painless unconsciousness.

Dr. Corning closed the discussion, and the Society adjourned.

CORRESPONDENCE.

THE PHYSIOLOGICAL DESQUAMATION OF VASCULAR ENDOTHELIUM.

To the Editor of THE MEDICAL NEWS.

SIR: My attention has been directed to some remarks made by Dr. Shakespeare in your issue of May 20. In speaking of inflammation in the bloodvessels, this writer claims priority in regard to certain views which I had announced as originating from personal observations.

My views on endothelial desquamation were first published in a paper on "The Histology of the Bloodvessels" (*New York Med. Journ.*, July, 1880), and again, in a somewhat amplified form, in *Satterthwaite's Manual of Normal Histology* (New York, 1881).

Dr. Shakespeare's views, on the other hand, were first expressed in an essay on "Reparatory Inflammation," etc., published in 1879, in the *Smithsonian Miscellaneous Collections, No. 321;* and the same opinions and observations, he informs us, "were also recorded in the editorial addenda in the American translation of Cornil and Ranvier's *Pathological Histology*, published January, 1880." It would thus seem that, however unwittingly (for Dr. Shakespeare very justly assumes my ignorance of his observations), I had yet made myself guilty of a plagiarism. But I shall presently show that what Dr. Shakespeare has observed, and what I have seen, are two entirely different things, and that my views are by no means identical with the opinions expressed by him. He is apparently much chagrined that my reviewers, both here and abroad, have awarded me "what credit there may attach to an original positive observation," while not the slightest reference is made to his researches, which, nevertheless, are supposed to antedate mine. This fact alone might have sufficed to convince him that, either his observations were not generally known, or else being known, were not understood to cover the same ground that mine did.

Nor can the significance of his observations be so stretched as to include the views advanced by me. Indeed, although at the time of writing my paper, as already stated, I was unaware of Dr. Shakespeare's investigations, I would even to-day, having carefully studied them, deem reference to his views as wholly superfluous.

Briefly told, what Dr. Shakespeare saw and described was the proliferation of the intima of bloodvessels under pathological conditions, and what I felt justified in assuming, was the occurrence of desquamation of vesicular endothelial cells within physiological limits. I never claimed that I actually observed any such process. But from observations made years ago while studying abroad, I felt justified in concluding that endothelial desquamation was a normal process, representing a physiological function of the inner coat of bloodvessels. Moreover, I advanced the opinion that desquamation in this sense afforded a rational explanation for the occurrence of certain free granules observed in the blood, and variously described by different authors.

The interest in these apparently mysterious and puzzling bodies has been recently revived by Bizzozero, who very positively announced the discovery of a new corpuscular element of mammalian blood. These bodies he considers as quite distinct from the invisible corpuscle of Norris, although the latter does not admit the justice of this assertion.

A whole series of cell-forms, intermediate between leucocytes and the ordinary red corpuscles, has been described by Malassez. The hæmatoblasts, so-called, of Hayem, the microcytes, the hyaline leucocytes, and various similar bodies observed in the blood, still remain objects of controversy among histologists.

It is the writer's opinion that, whatever part they may play in the functional alterations of the blood under pathological conditions, their origin in health is, to some extent at least, due to the desquamation of the endothelium lining the intima of the bloodvessels.

Certainly Dr. Shakespeare has never intimated any such possibility, and although I have no hesitation in admitting the rather theoretical nature of my reasoning, still, such as it is, it is original with me, and Dr. Shakespeare's claim of priority lacks the substantiation of facts. I remain, respectfully yours,

EDMUND C. WENDT, M.D.

May 29, 1882.
136 W. 34TH ST., NEW YORK.

NEWS ITEMS.

SARATOGA, N. Y.

(*From our Special Correspondent.*)

THE SARATOGA COUNTY MEDICAL SOCIETY AND THE NEW YORK CODE.—At the annual session of the Saratoga County Medical Society held at Saratoga Springs, June 6th, the following preamble and resolutions were *unanimously* adopted:

Whereas, At the last annual meeting of the Medical Society of the State of New York a Code of Medical Ethics was adopted permitting consultations with all forms of legalized practitioners of medicine; therefore,

Resolved, That the Saratoga County Medical Society hereby expresses its unqualified disapproval of the course thus taken, regarding it as opposed to professional and public interests, and as dishonoring a noble profession in the withdrawal of all distinctions between medicine proper and quackery.

Resolved, That we hereby assert our preference for, and adherence to, the old Code of Ethics, and instruct our delegates to support the same at the coming meeting of the State Medical Society.

LOCKPORT, N. Y.

(*From our Special Correspondent.*)

THE NIAGARA COUNTY MEDICAL SOCIETY AND THE NEW YORK CODE.—At the Annual Meeting of the Niagara County (N. Y.) Medical Society, held June 10, a resolution was offered and unanimously adopted expressing disapproval of the new Code, and instructing the Society's delegates to the next meeting of the State Society to use their influence in favor of its repudiation.

REVOLUTIONS never go backwards . . . . and the old-fashioned, honest, straightforward physician, who looks upon medicine as a profession and not as a trade, will have his public life made so miserable that he will draw himself into his own private shell and give up the conflict.—*Philadelphia Medical Times*, Feb. 25, 1882.

BUFFALO, N. Y.

(*From our Special Correspondent.*)

THE ERIE COUNTY MEDICAL SOCIETY AND THE NEW YORK CODE.—At the semi-annual meeting of the Erie County Medical Society held at Buffalo, on June 13th, a resolution approving the new Code of Ethics of the New York State Medical Society was laid on the table by an unanimous vote.

THE Medical Society of the State of New York, if we read the signs of the times aright, means to stick to its position, and there should therefore be no attempt at compromise.—*New York Medical Journal*, June, 1882.

SAVONA, N. Y.

(*From our Special Correspondent.*)

THE STEUBEN COUNTY MEDICAL SOCIETY AND THE NEW YORK CODE.—At the stated Annual Meeting of the Steuben County (N. Y.) Medical Society, held June 13, a resolution strongly condemning the new Code was offered, and its adoption was lost by a majority of one vote. A resolution was then offered and adopted that all Codes should be abolished.

BROOKLYN.

(*From our Special Correspondent.*)

ANOTHER ATTEMPT ON A PHYSICIAN'S LIFE.—On June 8th an attempt was made to assassinate Dr. P. L. Schenck, formerly Superintendent of the County Hospital at Flatbush. Dr. Schenck now resides at St. Mark's Avenue, Brooklyn. A man, who had formerly been treated as a pauper patient at the hospital, decoyed Dr. Schenck from his home by a letter, and then waylaid and fired three shots at him, two of which took effect, one in the thigh and the other in the chest; the latter inflicted a very slight wound, the shot having traversed his visiting-list, carried in his breast-pocket; that book probably preserved the doctor from instant death. The miscreant says his name is Thomas, that he was born in Ireland, that he has no home, and he glories in his murderous attack; in a word, he is a Guiteau-like tramp. He has put in jeopardy the life of a worthy and estimable gentleman. The recovery, however, of Dr. Schenck may be expected.

THE NUMBER OF PHYSICIANS IN BROOKLYN who have the qualifications requisite for registration in the annual *Medical Register* were 490, or 22 more than last year. The census was made shortly after the May moving-day, by the committee appointed for that purpose by the Kings County Medical Society, in aid of the New York Medico-Historical Society, which publishes the yearly "green-book," and which has not in any wise let down the bars in consequence of the passage of the New Code of the State Society.

VIENNA.

(*From our Special Correspondent.*)

SCLEROSIS UPON THE UPPER LIP.—Clinic of Prof. Zeissl. This patient, according to his own statement, had been sick for four months. His genitals are in a perfectly healthy condition; however, we find in the middle of the red of the upper lip a defect about the size of a bean, firm, giving, upon feeling, the sensation of cartilage. We are able to assert with confidence that this defect is the initial lesion of syphilis, as in both submaxillary regions hard swellings of the lymphatic glands, the size of a hen's egg, are seen and felt. Besides this, the patient has, upon the skin of the trunk, numerous, dark-colored, erythematous efflorescences, separated from each other by equal distances, which we designate as roseola syphilitica or erythema maculosum syphilitica.

The locality of the primary defect, in our case, in comparison with its usual appearance upon the genitals, is a very rare one.

Our therapy in this case will consist in the very recently famous employment of the bichromate of potassium internally, in pill form.

℞ Kali bichromat.,
Kali nitric, āā 1.00.
Extr. et pulv. Liquir. qu. s. ut. f. pill ducenta.
S. three pills, daily.

AN EARLY SYMPTOM OF DIABETES.—Prof. Bamberger mentions, as one of the earliest symptoms of diabetes mellitus, a peculiar odor of the urine, resembling chloroform. This odor is due to *aceton*, one of the most recently discovered constituents of urine rich in grape-sugar.

The medicines Prof. Bamberger at present employs in treating this disease are bromide of arsenic and the alkaline carbonates, as combined in Karlsbad water.

RESEARCHES UPON SOME OF THE RELATIONS OF HEAT IN ANIMALS WITH FEVER.—Prof. Albert read an interesting paper upon this subject at the last meeting of the Royal and Imperial Society of Physicians. After stating the doctrines of Claude Bernard, in respect to animal heat, he alluded to his own researches in Stricker's laboratory in 1872, as well as to the results of Dr. Robert Meade Smith's work in Ludwig's laboratory, more recently. It has been established by these various investigations, that the venous blood flowing out of a muscle is sometimes just as warm, sometimes warmer, sometimes colder, than the inflowing arterial blood.

Prof. Albert's recent research was directed to the relation existing in animals with fever. The experiments were performed upon large dogs, and the measurements of temperature made by thermo-electric needles. The fever was produced by injuring the spinal cord, and upon the following day injecting starch milk. The fever accordingly was a rapidly high one. Under these circumstances, it was found that the venous blood of a muscle, not functionally active as in the normal animal, was, at times, exactly so warm, sometimes colder, and again warmer than the arterial blood. The differences were constantly less according as the wounds were smaller. The temperature of the venous blood coming out of the abdominal glands was then measured, and great differences in temperature became evident. The temperature of the blood in the ascending cava was 5° C. above that of the rectum; at one time it reached 46° C.

The venous blood of the kidney or liver, during the course of the fever, was constantly higher in temperature than the arterial blood, although the differences were not so striking. Without doubt the large abdominal glands have the greatest share in the production of heat in animals with fever.

Future investigation will be directed to determine the special relations to heat production of individual organs.

THE PUBLIC HEALTH.—For the *week ending June 3*, there were 16 deaths from *small-pox* in New Orleans; 1 in Hudson Co., N. J.; and 2 new cases reported in Brooklyn. There were 6 deaths from *cerebro-spinal meningitis* in Buffalo; 2 in St. Louis; and 1 each in Richmond, New Orleans, and Shreveport, La. From *diphtheria* there were 9 deaths in Brooklyn; 1 each in Hudson Co., N. J., the District of Columbia, and Davenport; 5 in Buffalo; 8 in St. Louis; and 2 in New Orleans. From *scarlet fever*, 22 deaths in Brooklyn; 8 in Hudson Co., N. J.; 6 in Buffalo; 1 each in the District of Columbia, Richmond, Va., and Vicksburg; and 13 in St. Louis. From *typhoid fever*, 2 each in Brooklyn, the District of Columbia, and New Orleans; and 3 in Buffalo. *Measles* caused 7 deaths in Brooklyn; 3 in Buffalo; and 4 in St. Louis.

Consumption caused 28 deaths in Brooklyn; 11 in Hudson Co., N. J.; 7 in Buffalo; 17 in the District of Columbia; 13 each in St. Louis and New Orleans; and 4 in Richmond, Va. From *pneumonia* there were 37 deaths in Brooklyn; 12 in Hudson Co., N. J.; 2 each in Buffalo, Davenport, and New Orleans; 8 in the District of Columbia; 5 in St. Louis; and 3 in Richmond.

For the *week ending June 10*, the following returns of prominent causes of death have been reported.

Small-pox.—There has been a slight increase in the deaths reported from this cause in Cincinnati and New Orleans. With the exception of these two places, the statements received this week are all favorable, and show no epidemic prevalence of the disease. There is no report from Chicago. There were 4 deaths in New York City from this cause; 2 in Philadelphia; 52 in Cincinnati; 1 in Louisville, and 10 new cases; and 1 in Detroit, and 4 new cases.

Cerebro-spinal Meningitis.—There were 5 deaths from this disease in New York City; and 1 each in Philadelphia and Cincinnati.

Croup and Diphtheria.—New York City reports 13 deaths from croup; Philadelphia 2; and Boston, Cincinnati, and Detroit, each 1 death. From diphtheria there were 28 deaths in New York City; 13 in Philadelphia; 6 in Boston; 3 in Cincinnati; and 2 in Detroit.

Scarlet Fever.—There were 50 deaths from scarlet fever in New York City; 6 in Philadelphia; 1 in Boston, and 22 new cases; 17 in Cincinnati; and 1 in Detroit, and 17 new cases. This disease, it will be observed, is quite prevalent in Cincinnati, the deaths per 1000 of the population being nearly double the death-rate from the same cause in New York City, where there is also a prevalence of the disease.

Typhoid Fever.—This disease is reported to have caused only 1 death in New York City; 15 in Philadelphia; 3 each in Boston and Cincinnati; 2 in Providence; and 1 each in Louisville, Indianapolis, Nashville, and Memphis. Philadelphia is still burdened with a high death-rate from this cause, the continued prevalence of this disease seeming to indicate the presence of some unusual conditions of causation which apparently have not been discovered, or at least have not been overcome. The present agitation of the subject of an improvement in the water-supply and the sewerage-works is certainly well-timed.

Measles and Whooping-cough.—Measles caused 16 deaths in New York City; 4 each in Philadelphia and Cincinnati; and 1 in Detroit. From whooping-cough there were 14 deaths in New York City; and 1 each in Boston, Providence, Wilmington (Del.), Cincinnati, Nashville, and Augusta, Ga.

Consumption and Pneumonia.—There were 80 deaths from consumption in New York City; 45 in Philadelphia; 26 in Boston; 13 in Cincinnati; 4 each in Providence, Louisville, and Indianapolis; 3 in Nashville; and 2 in Detroit. From pneumonia there were 60 deaths in New York City; 27 in Philadelphia; 12 in Boston; 5 in Providence; 4 in Cincinnati; 3 in Indianapolis; 8 in Detroit; and 2 in Nashville. The decrease in the number of deaths from both causes is very generally noted; in some cases it is very marked.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending June 3, 1882, indicate that inflammation of the bowels, scarlet fever, and erysipelas have increased, and that intermittent fever and pneumonia have decreased, in area of prevalence.

Small-pox was reported present during the week ending June 3, and since then, at 8 places, as follows: at Kalamazoo, June 1; at Detroit (2 new cases), at Wayne (in Wayne County Pest House), at Port Huron (one case), at Cadillac (2 cases, convalescent), and at Flint (one case), June 3; at Grand Rapids (one death, June 6, six cases, June 7). Three cases of varioloid were reported at Pontiac June 7, two being children successfully vaccinated last year and recently exposed to chicken-pox. May 27, a case of small-pox, from Quebec, was found at Port Huron on an immigrant train passing over the Grand Trunk Railway; May 29, a well-marked case was found there on a train from New York. June 2, the Sanitary Inspector at Port Huron reported measles on immigrant train passing through the State over the Chicago and Grand Trunk Railway. June 1, one case of measles was found by the Sanitary Inspector at Detroit among immigrants arriving on Canada Southern Railway and leaving Detroit on the Michigan Central road.

THE CARTWRIGHT PRIZE of $500 of the Alumni Association of the College of Physicians and Surgeons, New York City, will be awarded in May, 1883, to the best medical essay, the subject to be selected by the writer. This prize is open to universal competition, and the conditions of its award are, that the essays presented must contain the results of original investigations made by the writer, and be handed in to a member of the Prize Committee on or before April 1, 1883. The Committee consists of Drs. Weir, Seguin, and Partridge.

THE H. W. BROCK PRIZE.—An annual prize of $20 has been instituted by Dr. James E. Reeves, to be known as "The H. W. Brock Prize," to be open for competition to members of the Medical Society of the State of West Virginia for the best original paper or essay on some subject pertaining to medicine or surgery. A committee was appointed at the late meeting for the purpose of carrying out the design of the donor.

The committee announces that the competition shall be governed by the following regulations:

1. All papers must be addressed to the chairman, Dr. A. F. Stifel, Wheeling, W. Va., and must be mailed in time to be received by him not later than April 1, 1883.

2. Each paper shall bear some distinguishing motto or device, but nothing which shall give any clue to the author's name or identity.

3. With each paper, the author shall send an envelope, within which he shall have placed a slip of paper or card containing his name and address; the envelope to be securely sealed, and to have inscribed upon the back of it the motto or device of the accompanying paper.

4. The committee, after deciding upon the paper to which the prize shall be awarded, will then open the envelope bearing the motto or device corresponding to the one borne by it, and the author's name will be ap-

pended to the paper, which shall then become the property of the Society.

5. All other papers, with their corresponding envelopes unopened, will then be filed away subject to the orders of their respective authors, and will be delivered to them either on personal application to the chairman of the committee, or by mail, provided that in the latter case the request is accompanied with stamps sufficient for the necessary postage.

6. The name of the successful competitor for the prize will not be announced before the first day of the annual meeting of the State Society for the year 1883.

INTERNATIONAL MEDICAL CONGRESS.—The Executive Committee held their final meeting on the 15th instant, Sir J. Risdon Bennett, F.R.S., in the chair. The Treasurer presented the balance-sheet of receipts and expenditures, signed by the auditors, Dr. Pitman and Prof. J. Marshall, F.R.S., from which it appeared that about £9030 had been received, and £8730 had been expended, leaving a balance in hand of £300, which the committee directed to be handed over to Dr. S. Wilks, F.R.S., Treasurer to the Association for the Advancement of Medicine by Research. The Treasurer stated that 3180 entrance fees had been paid, amounting to nearly £3300, besides subscriptions from 1105 persons, amounting to more than £5700; and that £1200, which had been promised as a guarantee fund in case of need by 126 subscribers, had not required to be called upon. It may be added that the volume of abstracts prepared for use at the sitting of the Congress, and the four volumes of *Transactions* published after an interval of less than five months, a copy of which has been presented to every member, cost about one half of the whole amount received. The meeting terminated by the passing of a cordial vote of thanks to the Honorary Treasurer, Mr. W. Bowman, F.R.S., and the Honorary Secretary-General, Sir W. MacCormac.—*Brit. Med. Journ.*, May 20, 1882.

THE WOUNDS OF LORD FREDERICK CAVENDISH AND MR. BURKE.—*The Lancet* gives the following particulars of the wounds received by the unfortunate victims of the dastardly murders in Phœnix Park, Dublin, on May 7th. From the position of the wounds it is clear that the victims of this horrible crime were assailed both from behind and in front. Lord F. Cavendish was struck three times from behind, once in the neck, once on the shoulder, and once in the back. The wound in the axilla was inflicted from the front, probably when the arm was raised in self-defence; and that in the left forearm was probably received in warding off a stab aimed at the front of the chest. The fatal wound was undoubtedly that inflicted from behind, and which divided the axillary vessels; and death must have been very speedy. Both the wounds in Mr. Burke's neck were probably inflicted from behind, as that on the left side was not a stab but a cut, and its direction was at first obliquely downward and inward, and then horizontal, as if the knife had been drawn across the neck from left to right from behind. The second smaller wound was probably made at the same time. The three wounds over the front of the chest were made from the front, as were also those on the left hand. That on the back of the neck, and the one below the left shoulder, were stabs from behind. The wound which pierced the heart from behind was the immediate cause of death, but in its absence the other two wounds of the lung would have caused very speedy death. The clothing of Lord Frederick Cavendish was cut in several places, and soaked in blood. One wound passed quite through the neck; behind it was an inch and a half long, and was situated close to the sixth cervical spine, which was broken off; it opened in front about an inch above the clavicle, where the skin was cut transversely for about three-quarters of an inch. A second wound was found above the spine of the right scapula, which traversed the supra-spinatus muscle, the bone and subscapularis muscle, the axillary artery and vein, and passing over the ribs was found to be continuous with a small skin-wound over the second right costal cartilage. The posterior end of this wound was angular, and measured two inches and a half across; the anterior was much smaller, only about an inch in length, and transverse in direction. A third wound was over the outer edge of the lower angle of the right scapula, and damaged the bone. There was also a wound about two inches long in the right axilla, passing upwards and inwards towards the head of the humerus; the axillary vessels, the shoulder-joint, and the thoracic cavity were uninjured by this wound, which was behind the vessels and evidently made by a knife held with its flat surfaces nearly horizontal. There was also a transverse cut over the centre of the left forearm, cutting through the muscles on the ulnar side; the ulna was found fractured at the bottom of the wound; the shaft of the bone was partly divided by the knife and partly fractured by the violence of the blow. Mr. Burke's clothing was considerably cut about, and blood had flowed freely from the mouth as well as from the wounds. He had received more wounds than Lord F. Cavendish—nine in all. They consisted of an incised wound on the left side of the neck about three inches long, reaching from just below the left ear downwards and forwards to an inch beyond the middle line. The lower part of the thyroid cartilage and the crico-thyroid membrane were divided, and the lingual and superior thyroid vessels were severed. but the carotid and jugular vessels were not injured. Half an inch above this on the right side of the neck there was a superficial wound about an inch long, in which no structure of importance was injured. There were three wounds over the front of the chest. One, measuring one inch and a quarter transversely, was situated over the second left costal cartilage; the cartilage, which was ossified, was divided quite across, the internal mammary vessels were severed, and the lung was incised for a considerable depth. The large vessels were not injured by it. This wound was the source of the hæmorrhage from the mouth. Another wound, transverse in direction, about three-quarters of an inch long, half an inch above and to the left of the left nipple, also penetrated the lung for a short distance; it did not injure the pericardium. The third was a small wound over the centre of the sternum, reaching down to, but not penetrating the bone. On the back of the body two wounds had been inflicted. One, the most severe, was about two inches long, oblique in direction, just over the lower angle of the left scapula. It had penetrated the bone, the chest wall, and, passing through the pericardium, opened the left ventricle of the heart; the pericardium was found full of blood. The second was on the right side of the neck behind, vertical in direction, over an inch in length; it divided the muscles quite down to the spine, but did not penetrate any important vessel or injure the spine. There were, further, two longitudinal scratches on the left index finger and a small wound near the tip of the left middle finger. All the wounds were clean cut, except the large one over the scapula of Mr. Burke, which was rather jagged. They were also nearly of the same size, as if they had all been made with similar weapons. These were evidently daggers about ten inches long. In each case the cause of death was hæmorrhage, and amid all the sadness which gathers round this tragic event we may cherish the consolation that death was so speedy as to be robbed of its pains and terrors.

THE BACILLI OF TUBERCLE.—At the Physiological Laboratory at King's College on Monday, May 8, Mr. Watson Cheyne and Mr. E. M. Nelson exhibited some specimens showing the bacilli found in tubercle, prepared by Dr. Koch, and brought over to England by Dr. Goltdammer. On one slide was a miliary tubercle from the human lung, crushed and spread out on a coverglass, and stained with methylen blue and vesuvin; in this, the bacilli appeared as delicate blue rods among the brown-stained nuclei and granular material. The second specimen was a section of a tuberculous mesenteric gland, from a guinea-pig which had been inoculated with tubercle; the bacilli lay in large numbers among the nuclei towards the outside of a tubercle. The third was a section of a tuberculous mesenteric gland from a cow affected with bovine tuberculois (*Perlsucht*). This specimen demonstrated the presence of bacilli in the interior of giant-cells. The discovery of the bacilli in this case was much more difficult than in the others: but on carefully focussing, several minute delicate blue rods could be found. Mr. Cheyne showed other forms of bacilli, for comparison with the tubercular varieties. Large numbers of the bacilli, which have been described as occurring in leprosy, were shown in a section of a leprous nodule. These differ from the tubercle bacilli in being more pointed at the end, and in being stained by methyl violet (Weigert's nuclear method of staining). There was also a specimen of the bacilli which produce septicæmia in house-mice, and of a long delicate form which apparently caused erysipelas in the ear of rabbits (see Koch's *Traumatic Infective Diseases*). In contrast to these was a splendid specimen of the bacilli of anthrax in the lymph-sinuses of a lymphatic gland. It is satisfactory to have seen and confirmed the presence of these organisms in tubercle; while, by the exhibition of other forms of pathogenic bacilli, each having their special characteristics, one is led to see that the presence of these organisms, in the morbid processes can hardly be a matter of accident. The lenses employed were Zeiss's $\frac{1}{12}$ oil, with Abbe's condenser, and Powell and Lealand's $\frac{1}{12}$ oil, and $\frac{1}{20}$ water immersions, with achromatic condensers. The demonstration was largly attended, most of the best known British authorities on the germ-theory and on antiseptic surgery being present.—*Brit. Med. Journal*, May 13, 1882.

NEW YORK OPINIONS OF THE NEW YORK CODE.—Drs. Alonzo Clark, F. H. Hamilton, and N. Bozemann, have been interviewed by the *New York Tribune* in reference to the New York Code. They approve the action of the American Medical Association in excluding the delegates from the New York State Medical Society, and express the belief that at the next meeting of the State Society there will be a full representation of the profession of the State, and that the new Code will be repudiated by the Society.

A SINGULAR LEGACY.—A patient, who had benefited by M. Ollier's subperiosteal method, bequeathed to him his elbow-joint as a token of gratitude. The legacy proved a valuable one for pathological science, since the physiological process of renewal of the tissues could be followed almost step by step.—*Brit. Med. Journal*, May 13, 1882.

OBITUARY.—A telegram from London announces the death, on June 6, of James Spence, F.R.S., Professor of Surgery in the University of Edinburgh, and late President of the Edinburgh Royal College of Surgeons. Professor Spence was born in 1812. He was appointed Professor of Surgery in the University of Edinburgh in 1864. He published, in 1871, *Lectures on Surgery*.

NOTES AND QUERIES.

JOSEPH LEIDY CHAIR OF ANATOMY IN THE UNIVERSITY OF PENNSYLVANIA.

To the Editor of THE MEDICAL NEWS.

PHILADELPHIA, May, 1882.

THE following circular has been issued in relation to the endowment of the Chair of Anatomy in the University of Pennsylvania:

"There is a wide-spread feeling that the pre-eminent services rendered to science by Prof. Joseph Leidy are such as to call for a suitable and substantial acknowledgment.

"He has held the Chair of Anatomy in the University of Pennsylvania for thirty years; and, in addition, the Professorship of Natural History in Swarthmore College for twelve years.

"As an anatomist, the foremost place is conceded to him; and as a scientist, his fame is world-wide. His contributions to natural history have ranked him with such naturalists as Cuvier, Agassiz, Owen, and Huxley.

"About to enter his sixtieth year, it is felt that the time has come to provide a testimonial which, while expressing the admiration of those who unite in it for his disinterested and self-sacrificing devotion to science, will relieve him from some elementary teaching, and enable him to devote himself hereafter to those fields of profound investigation in which he is unrivalled. This is the more necessary because the system of education conducted in the medical department of the University of Pennsylvania has been so greatly changed as to demand from both teacher and student far greater efforts than formerly. It is intended to still further enlarge and elevate the course, so that it shall compare favorably with the highest instruction in European schools. Such changes involve increased expenditures, and a temporary reduction in the receipts from tuition fees. Consequently it becomes doubly important to secure endowments for those chairs, which, like that of anatomy, demand the entire time of their occupants. It is proposed, therefore, that the sum of $100,000 shall be raised, the interest of which shall be annually paid to Prof. Joseph Leidy during his lifetime; and that, after his death, the said income shall be applied in perpetuity to the maintenance of the Joseph Leidy Chair of Anatomy in the University of Pennsylvania. The names of the contributors will be perpetuated in a suitable manner.

"Subscriptions to this fund will not be binding until the amount of $25,000 is secured; although it is hoped they will be paid promptly, as they will then be invested immediately and become effective. Subscriptions may be made payable during the present year, or in two annual instalments.

"Rt. Rev. Wm. Bacon Stevens; S. D. Gross, M.D.; A. J. Drexel; Alfred Stillé, M.D.; Henry C. Gibson; H. C. Wood, M.D.; S. Weir Mitchell, M.D.; Spencer F. Baird (Smithsonian Institute); John Welsh; George W. Childs; D. Hayes Agnew, M.D.; Rev. John S. Macintosh; Fairman Rogers.

"All subscriptions should be sent directly to William Pepper, M.D., 1811 Spruce Street."

NOTICE TO GRADUATES OF BELLEVUE HOSPITAL MEDICAL COLLEGE.

A second decennial revision of the Catalogue of Alumni of this College is being prepared for publication, and we are requested to ask that all graduates send their present address at once, on a postal-card, to the Historian of the Alumni Association, Bellevue Hospital Medical College, New York.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JUNE 6 TO JUNE 12, 1882.

REED, W., *Captain and Assistant Surgeon.*—To accompany the troops from Fort McHenry, Maryland, and Washington Barracks, D. C., to summer camp at Gaithersburg, Md., and remain on duty with them during the encampment.—*S. O. 104, Department of the East, June 9, 1882.*

GRAY, WM. W., *First Lieutenant and Assistant Surgeon.*—Fort Townsend, Wyoming Territory. Granted leave of absence for one month, to take effect the 3d proximo.—*S. O. 67, Department of the Columbia, May 24, 1882.*

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*

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ORIGINAL ARTICLES.

A REVIEW OF SOME OF THE MORE IMPORTANT SURGICAL PROBLEMS OF PRESIDENT GARFIELD'S CASE.

BY J. WILLIAM WHITE, M.D.,

DEMONSTRATOR OF SURGERY AND LECTURER ON OPERATIVE SURGERY IN THE UNIVERSITY OF PENNSYLVANIA, SURGEON TO THE PHILADELPHIA HOSPITAL, FELLOW OF THE AMERICAN SURGICAL ASSOCIATION, ETC.

I AM permitted by Dr. D. Hayes Agnew to say that he entirely endorses the statements and opinions contained in this paper, which has been submitted to him for criticism.

Its motive is to be found in the fact that numerous articles which have from time to time appeared in both the medical and the lay press, seem to indicate that in the minds of many intelligent people, within and without the profession, there is still much misconception regarding several important points in the case of the late President Garfield.

When the circumstances of that case are recalled, the intense excitement which prevailed during its progress, and the extraordinary character of many of the published statements referring to it, it is hardly to be wondered at that a confused or altogether erroneous impression should have been left on the minds of many persons who have heard or read only partial or incorrect accounts of the questions involved.

While the assassin was still undergoing trial, and the question of his responsibility was undetermined, and while there was a possibility that the treatment of the case might become an element in either defence or prosecution, it seemed proper to refrain from further discussion of the subject. Now, however, there can be no objection to a brief review of the points alluded to, and in attempting this I shall, as far as possible, confine myself to a statement of what appear to be undoubted facts, and shall not seek to particularize or otherwise notice opposing statements.

In bringing together the facts which I shall mention, I have especially consulted the official report, published in the *American Journal of the Medical Sciences* for October, 1881, and have carefully perused the excellent articles of Drs. Ashhurst, Hunt, Sims, Hodgen, Shrady, Weisse, Kumar, Schüssler, Figueira, and others, as well as the editorials and criticisms of the medical press of this and foreign countries.

The points which it seems worth while to consider, on account both of their general surgical interest, and of the misconception alluded to, and which may be taken up seriatim, are as follows:

1. Did the relative positions of the patient and assassin at the time of the shooting afford any indication of the course of the ball as revealed at the autopsy?

2. Was it probable that at any time the ball could have been detected or located by the use of probes, and, if so, should such an endeavor have been made?

3. Did the subjective symptoms indicate anything more serious than nerve injury or spinal concussion, or, in other words, did they furnish reliable material for diagnosis?

4. Was the subsequent treatment in any way whatever hurtful or defective, or could it have been modified with advantage, if the exact character of the injury had been known?

5. What was the immediate cause of death?

6. Was the wound necessarily a mortal one?

1. At the time the shooting took place, the President and Guiteau stood about six feet apart, the latter a little to the right of his victim who was just in the act of turning to the left. The ball penetrated the skin three and a half inches to the right of the spine over the tenth intercostal space, comminuted the eleventh rib, fractured *the twelfth rib* at a point only an inch nearer the median line, and then passed through the connective tissue and the fat behind the upper edge of the right kidney, and perforated the psoas fascia and the psoas magnus muscle near its attachment to the first lumbar vertebra.

Thus its course could not by any possibility have been a straight line, the first deflection occurring when it impinged upon the eleventh rib. Otherwise to account for the fracture of the twelfth rib, it would be necessary, as I have determined experimentally, to suppose that the hand which held the pistol was at an elevation of at least five feet above the wound of entrance, a manifest absurdity. If the second shot, which was fired while the President was falling, had been the one which inflicted these injuries, the actual course of the bullet might then have been in the direct line of fire, but all accounts agree in stating that the second shot inflicted merely a slight flesh wound of the arm.

Now, although it is a well-recognized surgical precept that in the examination of gunshot wounds the relative position of the parties furnishes important information, it is yet equally well understood that such information loses most, or frequently all, of its value if the missile has impinged upon some resistant substance at the time of or soon after its entrance into the body.

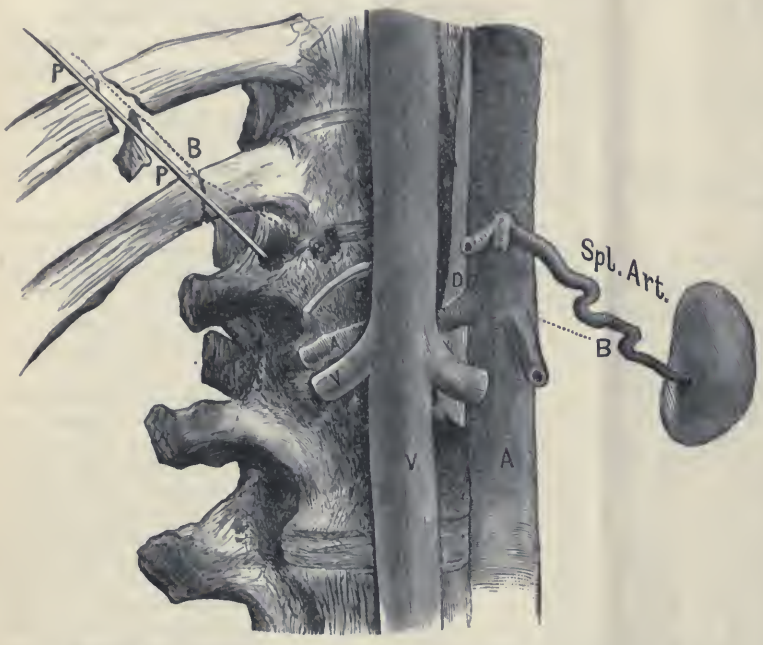
A knowledge of the positions of Guiteau and the President might have been valuable in determining the course of the bullet from the skin to the eleventh rib, but as to its probable path beyond that bone, was of infinitely less importance. Indeed, if it had been relied on as a means of diagnosis, it would have led to an entirely erroneous conclusion.

2. A glance at the accompanying diagram (Fig. 1), and a momentary review of the anatomy of the part, will be sufficient answer to the query as to the

possible results of persistent probing at any time after the receipt of the injury.

B B represents the course of the ball from its point of contact with the upper edge of the eleventh rib

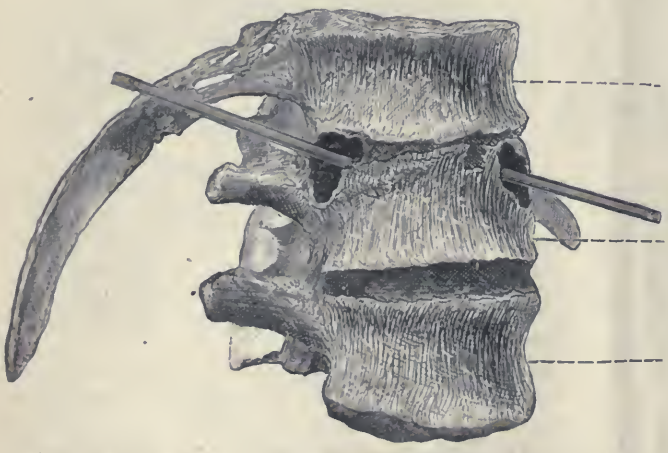
FIG. 1.



A diagram representing the surgical relations of the parts involved in the President's wound.

to its lodgement on the left of the spine. It must be remembered that over all that portion of the vertebral column represented in the cut, over the transverse processes, and over the vertebral extremities of the eleventh and twelfth ribs lie the psoas

FIG. 2.



Taken from a photograph of the twelfth rib, last dorsal and first and second lumbar vertebræ, in the President's case.

fascia and the psoas magnus muscle, the fibres of which, running longitudinally, were penetrated by the ball, and beyond all doubt speedily closed over its track. The succulence and elasticity of the intervertebral cartilage which it next penetrated, would in like manner have caused that tissue to close behind the ball, as it does after an awl or a trocar is inserted into it. A little external to the wound of entrance in the vertebra lies the intervertebral foramen between the last dorsal and first lumbar vertebræ, transmitting the last dorsal nerve, and leading directly into the spinal canal. A, V, D, are the abdominal aorta, vena cava, and thoracic duct.

Fig. 2, taken from a photograph of the vertebra itself, and published in the official report of the autopsy, represents the course of a probe through its body, and it will be seen that here again the track was not a perfectly straight one. The line of the probe at the wound of entrance if continued does not even impinge upon the wound of exit at any point of its circumference.

The situation needs no further elucidation. If we suppose that the probe (represented by *p*, *p*, Fig. 1) could have followed the track of the ball through the large muscular mass of the psoas, though this is highly improbable, it is evident how dangerous, how altogether inexcusable, any further exploration would have been in that region. Directly in front of the end of the instrument would have been a foramen leading straight into the spinal cord itself, as yet not seriously injured. A little in advance, anteriorly, lay the vena cava and the thoracic duct, with their delicate and easily ruptured walls, and a slight distance beyond was the aorta; just below were the cords of the lumbar plexus, which, also, might easily have been damaged. When it is remembered that beyond all this the track lay through the body of a vertebra, and that the ball emerged from the spine anterior and external to the left psoas muscle, it can hardly be believed that any thoughtful person would insist either on the possibility of having discovered the ball itself under these circumstances, or, if for the sake of argument that were admitted, on the propriety of having made the search. The depth of the wound prevented digital exploration from revealing anything of value. Of course, when the consultants were called in, and the wound was found filled with a firm clot, the dangerous symptoms subsiding, and professional attendants at hand to give an account of the previous explorations made with probes and fingers, it would have been contrary to all received surgical principles, and opposed to all customary practice, for them in any way to have explored or disturbed the wounded part.

3. The possibility of having made the diagnosis from the nervous symptoms of the patient, and without reference to physical exploration, has been repeatedly asserted, but it seems to me without a proper consideration of the peculiarities of those symptoms. They consisted in their totality, in hyperæsthesia of the right side of the scrotum, and tingling pains in the feet and ankles, at first altogether on the right side, and always much more marked on that side than on the left. They were temporary, diminishing rapidly in severity, and disappearing altogether in a short time, were identical with those which every one has experienced after contusion of a nerve—as in striking the "crazy-bone"—and were unassociated with any motor or sensory paralysis.

It cannot be reasonably contended that these symptoms are *characteristic* of fracture of a vertebra, or of grave and irreparable damage to the cord, or, indeed, of anything except *some* form of nerve injury of a fleeting character. They pointed directly to a moderate degree of concussion, to laceration of a nerve trunk, or to some other reflex source.

"Occasionally,[1] when the trunks of nerves are directly injured (not divided, but violently pushed aside), the wound will be accompanied with intense pain, but none will be experienced locally; the pain which is felt will be referred far away from the track of the projectile to some distant part, to which the nerves are distributed. . . . Less rare cases are those in which pain is not only felt in the wounded limb, but reflex pain is also felt in the opposite uninjured limb," etc.

"Nerve injuries may also cause pain which, owing to inexplicable reflex transfers in the centres, may be felt in remote tissues outside of the region which is tributary to the wounded nerve."[2]

"In Case IV., Hutchinson's Series, p. 313, the median and ulnar nerves being injured, there was pain in the unhurt hand. Pirogoff, p. 384, has a similar instance from injury to the right brachial plexus.

"In two cases, wounds of one leg seemed to the patient to be truly in the other."[3]

So far as I know, all the diagnoses of spinal injury which were claimed to have been made in different parts of the country, first appeared after the publication of the autopsy, and this is rather to the credit of their authors than otherwise, as certainly no one having merely those symptoms submitted to him in a similar case to-day, would be justified in asserting the existence of a fractured vertebra or a grave injury of the cord.

Prof. Kumar, of Vienna, after a lengthy criticism of the case in the light of the clinical history and the autopsy, wrote:[4]

"Evidences of paralysis in the region of the lower extremities were never noticeable; the only symptoms of disturbance of nerve function were those already mentioned,—hyperæsthesia of the skin of the feet and ankles, and of the right half of the scrotum,—which at the end of the first week had entirely disappeared. From all these symptoms no conclusion as to the course of the ball could be drawn."

Lidell says:[1]

"The general symptoms of gunshot fracture of the spine are not essentially different from those which are present in other forms of that injury, and they are referable mainly to paralysis, either partial or complete (but commonly the latter), of all the muscular apparatus supplied with spinal nerves given off at or below the seat of fracture."

Hamilton[2] wrote in 1865:

"In a few cases a ball has been known to pass through the side of the body of one of the vertebræ, leaving a round hole or a lateral furrow, without coming in contact with the spinal marrow or the bloodvessels. It is not probable that we shall be able to diagnosticate such a case clearly during the life of a patient, and if we were able to do so, we do not see what benefit could be derived from any surgical operation."

Legouest[3] says:

"It is always very difficult, if not impossible, to be assured that the bodies of the vertebræ are injured when there are no symptoms of a lesion of the spinal marrow. The surgeon in most of these cases is constrained to leave them to the efforts of nature, watching for the appearance of those accidents which may accompany the presence of foreign bodies, and which are aggravated in such cases by the importance of the organs in the neighborhood of the wound."

Agnew[4] says of fractures of the vertebræ:

"Except in fractures of the spinous processes, where the damaged part is entirely accessible to the touch, we cannot affirm the existence of such an injury with any degree of certainty. The presence of certain symptoms following a sufficient cause, furnishes ground for supposing the existence of a fracture, and yet these may all be present without any injury of the kind. The prominent symptom is paralysis."

Authorities to this effect might be multiplied indefinitely, but the question hardly admits of dispute.

If, then, a study of the positions of the wounded man and his assailant was without diagnostic value; if probing to any extent was strongly contraindicated, and could not possibly have resulted in anything but harm; and if the subjective symptoms were not distinctive, or were positively misleading, it is evident that the materials for definitely determining the character of the injury were altogether wanting. Much has been written in regard to "mistaken diagnosis," even by gentlemen who intended to defend the management of the case; but it has always seemed to me that this did not fairly state the situation. An "absence of diagnosis" on account of a total lack of necessary evidence, would have more nearly expressed it, and every surgeon of experience knows how frequently and how unavoidably this occurs. As I have already stated elsewhere, at a time when speculation was rife as to the exact seat of the bullet, and when we heard daily of certain imaginary movements

[1] Gunshot Injuries, their History, Nature, and Treatment, by Surgeon-General T. Longmore. London, 1877, p. 145.
[2] Injuries of Nerves, by S. Weir Mitchell, M.D., Philadelphia, 1872, p. 193.
[3] Ibid., p. 146.
[4] Präsident Garfield's Verwundung, von Primararzt Dr. Kumar, Wiener medizinische Blätter, November 10, 1881.

[1] American Journal of the Medical Sciences, vol. xlviii. p. 311.
[2] Military Surgery, p. 338, quoted by Dr. Hunt.
[3] Treatise on Military Surgery.
[4] The Principles and Practice of Surgery, Philadelphia, 1878, vol. i. p. 825.

which it made, Dr. Agnew, who, doubtless, in this as in other matters represented accurately the opinion of the surgical staff, assured me that he did not know the position of the ball, and knew of no safe means of determining it. And Dr. Hunt has shown, by a letter written to him by the same gentleman on the 23d of August, 1881, that the hopelessness of the case was fully appreciated by most of the surgical attendants.

4. Recognizing, then, that, in the absence of a positive diagnosis, it was proper in this as in all other cases under the same circumstances to treat symptoms as they arose, it may be well to inquire into the character and effects of that treatment in this case.

The vomiting immediately after the accident and the temporary retention of urine, were usual symptoms of shock, and received all necessary attention. The nervous symptoms subsided, as has been said, in a short time, without requiring any special treatment. The rigors which occurred about the 22d of July were due, in the first instance, to the formation of a small abscess under the erector spinæ muscles, possibly caused by the irritation of a small fragment of the broken rib, buried in the contiguous muscle. Evacuation of the abscess, and removal of the bony spicula, resulted in prompt disappearance of the chills and in subsidence of the temperature. It seems probable that about this time the blood received its first septic impression; but this is not to be wondered at when we recall the fact that suppuration occurring in this region is rarely circumscribed, the pus, owing to the scanty amount of connective tissue, and to the presence of loose masses of fat, finding its way freely through the surrounding parts, and thus affording the best possible condition for decomposition and for the absorption of poisonous matters. The laceration of the cancellated structure of the first lumbar vertebra doubtless contributed largely to the production of the septicæmic condition, which was in no wise due to lack of proper or sufficient drainage. More favorable circumstances for its production than existed in the comminuted and softened cancellous tissue, with its open venous sinuses, bathed in ichorous pus, could hardly be imagined.[1]

The passage into the right iliac fossa, caused by the gravitation of the pus in this direction, and ending in a point of inflammatory induration, gave rise to the report that the ball might possibly have taken this direction. The autopsy showed that this was not the case, but it also developed the fact that the wound proper was thoroughly drained through this channel, and that the second operation (performed on August 8th), which, by an opening below the twelfth rib and directly through the quadratus lumborum muscle, effectually drained the space between that muscle and the peritoneum, and indeed the whole iliac and lumbar regions, also aided in carrying away the products of suppuration from the neighborhood of the wounded vertebra. Indeed the abscess thus evacuated had doubtless been conducted directly to this point from the wounded vertebra by the psoas fascia.

The grounds which seemed to exist for believing this sinus to be the track of the ball, especially in the absence of any evidence that it had gone in a different direction have been well expressed as follows:[1] The anatomical possibility that a ball deflected downwards from the eleventh rib might take the same course as did the sinus to the iliac fossa; the rapidity with which this sinus formed; the readiness with which the drainage tubes passed; the fact that the incision of the second operation tapped the sinus below the twelfth rib; the fact that the wound of entrance of the ball healed so promptly after the incisions below; the existence early in the case of a point of tenderness in the right iliac fossa; and the subsequent recognizable induration there which gradually diminished.

I desire to reiterate, however, that, although this view was thus strongly favored by these facts, it was not held unreservedly by the surgical staff, and by some of them was, at the most, regarded merely as a possibility.

The drainage of the long narrow passage into the iliac fossa by a counter-opening at its lower extremity, which, it has been asserted, was an indication not met by the surgeons, would have necessitated an abdominal section, displacement of the viscera, and division of the posterior layer of the peritoneum, and would have resulted in absolutely no benefit, as in the recumbent position the pus would have continued to gravitate toward the opening in the lumbar region, as it did throughout the entire case. It must be remembered, also, that the only instruments which would penetrate this track were small and flexible; that when introduced, their lower extremities could not be felt through the abdominal walls, and that therefore an extensive and dangerous operation might have been performed without revealing the situation of the sinus or effecting a communication with it.

The fact that drainage was thorough and complete, and that no portion of the unfavorable symptoms was due to neglect in this respect, was fully established by the absence of purulent collections either along the track of the ball or in the passage caused by the burrowing of the pus. There was no time previous to the first operation at which the accumulated pus did not pass out of the original wound, but its exit was favored by gravitation after the two operations which brought the external openings on a lower level, and enabled them not only to drain completely the iliac and lumbar regions, but also to carry away any discharge that may have come from the fractured vertebra.

Antiseptic treatment was employed throughout as carefully as possible, although the case was in its very nature especially unlikely to be materially benefited by it.

Drainage tubes were used until it became evident that they were unnecessary.

[1] "A long, interrupted, and sinuous shot-wound with several fractured bones in its course and terminating in the neighborhood of the abdominal cavity, necessarily presents every facility for unhealthy suppuration, the formation of secondary abscesses, the retention of pus, and all their accompanying inseparable and unavoidable evil consequences."—Kumar, op. cit.

[1] Dr. F. D. Weisse, Medical Record, Oct. 8, 1881.

Prof. Max Schüller, of Berlin, after a careful review of all these points, wrote :[1]

"Even if a suspicion of the wound of the spine had arisen, the problem of treatment, which the attending surgeons were endeavoring with the greatest skill to solve, would have undergone no alteration."

5. The subsequent complications through which the President was being so skilfully, and we may say successfully, carried are familiar to every one. The gastritis, a result of chronic dyspepsia; the parotid inflammation, a not uncommon accompaniment of exhausting fevers; the bronchitis and broncho-pneumonia, due partly to his long-continued supine position, and partly to the unavoidable septicæmia, were being carefully watched and treated, when death occurred from rupture of the splenic artery.

There can be no doubt that the coats of this vessel were either injured at the time of the shooting, or were involved in a slowly developing inflammation and ulceration, extending from the contiguous track of the ball. The rigors which preceded death were doubtless due to the successive hæmorrhages which were indicated by the lamination of the blood-clot found in the peritoneal cavity.

The theory that the rupture of the artery was caused by "malnutrition of the coats, the result of pyæmia," is hardly worthy of mention, no such case due to systemic influences, and not affected by local conditions, having ever been recorded. It is only equalled in absurdity by the alternate theory emanating from the same source, that the blood in the peritoneal cavity was "pushed out" of the vessels by the injecting fluid, the author of these remarkable hypotheses having evidently been ignorant of the fact, to which his attention has since been called by Dr. Wm. Hunt, that after death the arteries do not contain any material quantity of blood.

The edges of the ulceration in the splenic artery were adherent to the posterior layer of the peritoneum, which fact is in itself a sufficient answer to all theories of post-mortem rupture.

During the life of the President there was one symptom which probably pointed to the first yielding of the coats of this vessel. A few days before going to Elberon, he suddenly developed a "sinking sensation" and a peculiar pain at the end of the sternum, which, after a few minutes, disappeared. The latter very closely resembled, both in character and situation, the pain which immediately preceded his death, and was doubtless due to a similar but slighter hemorrhage.

No metastatic abscesses were found at the post-mortem; the only accumulations of pus which were discovered being in a cavity on the under surface of the liver, which may have been a result of contusion by the broken rib at the time of the injury, and, at any rate, did not communicate with the wound, and another, one-third of an inch in diameter, just beneath the capsule of the left kidney. With the exception of the pulmonary changes, all the viscera were free from acute pathological alterations.

This brief review of the history of the case will serve as an answer to the fourth and fifth questions. The treatment was cautious, but thorough, and no indication was overlooked or disregarded. Wherever collections of pus took place, they were properly opened by free incisions made at the most dependent portions. These incisions drained not only the course of the abscess, but communicated freely with that portion of the spine which had been penetrated, and, therefore, with the track of the ball, and the completeness of the drainage was shown by the absence of pus accumulations either in the locality traversed by the ball or in the iliac or lumbar regions. The treatment also as regards the other complications, the parotitis, bronchitis, dyspepsia, etc., was in the most marked degree careful and judicious, and, indeed, may be said to have prolonged the life of the patient for many weeks.

As to the immediate cause of death, it was, as has been stated, the rupture of an aneurism of the splenic artery. The ball itself had become encysted, and had given rise to no damage whatever, after the moment of its lodgement, but the injury to the cancellated tissue of the lumbar vertebra was sufficient to explain all the septicæmic symptoms, and in time would doubtless of itself have proved fatal.

6. In attempting to reply to the sixth and last question, as to whether or not the wound was necessarily a mortal one, much time and labor has been spent in a review of all the authorities bearing upon the subject. It may be said at once that in the whole range of surgical literature, civil and military, no similar case, followed by recovery, has ever been recorded, and this statement is made with the full knowledge that it has been asserted that such recoveries are not infrequent. In some instances these erroneous assertions may have been due to neglect properly to classify the cases, which are often very imperfectly reported. Of course, it is well known that fractures of the vertebral processes are not especially fatal injuries, and that a large proportion of them recover. Many of these are recorded under the general head of fractures of vertebræ, but evidently have no bearing upon the case in question.

In a few instances it is difficult to see how the error could have been other than a deliberate attempt to misrepresent the facts. For example, in one article[1] upon the surgical treatment of President Garfield, the assertion is made that

"Lidell, one of the most experienced of our military surgeons during the late civil war, states that of ten cases of gunshot fractures *of the bodies* of the vertebræ without injury of the cord, four recovered."

What Lidell[2] *does* say, is that

"In the British army, during the Crimean War, there occurred ten cases of gunshot wounds with *fracture of vertebræ*, but without lesion of the spinal cord, of which six died and four recovered so far as to be invalided; there also occurred twenty-two cases of gunshot wounds with fractures of the vertebræ and lesion of the spinal cord, all of which died."

On the very same page Dr. Lidell, who is truly described as one of the most experienced of our military surgeons, says:

[1] Deutsche medizinische Wochenschrift, No. 47, p. 634.

[1] North American Review, December, 1881, p. 579.

[2] American Journal of the Medical Sciences, vol. xlviii. p. 317.

"Leaving out of the calculation such fractures as involve the spinous process alone, the writer has never seen a case of gunshot fracture of a vertebra get well, and he might add that he has never seen life prolonged for a month after the infliction of that injury."

In the same criticism of the treatment of the President it is asserted that

"Surgeon-General Longmore, of the British army, says: 'Balls have been known to pass through the bodies of vertebræ and apparent cure follow.'"

The *full* quotation is, "Balls have been known to pass through the bodies of vertebræ, and apparent cure follow; but, as such patients in military practice are usually invalided out of the service as soon as they are fit to leave hospital, no opportunity is afforded of observing the consequences which ulteriorly ensue."[1]

A writer, whose only motive was to establish a surgical fact, would hardly have omitted the latter half of the sentence.

A quotation from Jobert de Lamballe, is translated by the same person, as follows:

"Although the ball may have traversed the body of the vertebra in its anterior part, and although it may have caused paralysis, we should still trust to the infinite resources of nature."

And this is followed by an account of a fracture in the lumbar region, resulting in incomplete cure. This portion of the article in question also needs a trifling correction.

What Jobert says is—

"Lorsque la balle aura traversé le corps de la vertébre par sa partie anterieure, et qu'elle aura déterminé une paralysie, il faudra encore espérer des resources infinites de la nature,"[2] etc.

That is, "*When* the ball shall have traversed the body of the vertebra, it will be necessary to trust to nature," which is a very different idea from the one ingeniously conveyed in the other translation by the unauthorized use of the word "although." The case which follows is not even stated by Jobert to be a *gunshot fracture* at all, much less a perforating one. As it has been thought worth while to quote this author, it may be remarked that on the same page he says very definitely that in cases of gunshot fractures of the vertebræ, and particularly where the ball is lodged in the body of the vertebra:

"Attempts at extraction are dangerous and often useless," and that "only when paralysis exists will it be necessary or prudent even to make incisions, or to search in the simplest manner for the foreign body or for spiculæ of bone."

The case of Dr. Hamilton, reported to the New York Pathological Society on September 25, 1867, was simply one in which three years previously a ball had entered on the left side a little above the crest of the ilium and about four inches from the spine, and had passed across deeply and nearly horizontally to the right side, where it lodged. This was followed by paralysis and the escape of some fragments of bone, and the man finally recovered. The opinion that "the ball had struck the body of the vertebra" was certainly without any demonstrative evidence, and it is not even stated that the pieces of bone could be identified as portions of a vertebra. Even if this had been the case, however, it is far from proving that the ball had *perforated* the vertebra. In his remarks to the Society on presenting this case, Dr. Hamilton said:

"In the Surgeon-General's Report, No. 6, one hundred and eighty-seven examples of gunshot fracture of the vertebræ are reported, of which one hundred and eighty died, and of seven which recovered not one was a fracture of *the body* of a vertebra."[1]

A few additional authorities out of many may be mentioned corroborative of the assertion as to the fatality of such wounds.

Demme[2] says:

"Extensive injuries or lodgement of balls in vertebræ or in the cord give rise either to death or incurable paralysis."

He makes no exceptions.

Macleod[3] says:

"All the fractures of the vertebræ were promptly fatal, except two among the officers and two among the men, all of which were either fractures of the transverse processes in the neck, or of the spinous process only. Even where the spinal cord, apparently, was not primarily injured, inflammation of it or its membranes was sometimes set up and quickly proved fatal. The functions of the spinal cord were occasionally destroyed temporarily, or even permanently, where no discoverable lesion existed."

Gross[4] says:

"Gunshot wounds of the vertebræ, with lesion of the spinal cord, are nearly always, if not invariably, fatal. Of twenty-two cases of this kind in the English army, in the Crimea, not one recovered. Even when the bones alone are affected the danger is generally very imminent, most of the patients thus affected dying in a short time."

Pirogoff[5] quotes three cases of embedding of the bullet in the vertebral bodies; all died.

Hennen[6] has never seen a case in which the performance of any operation could have been of service. The picking away of splinters of bone or other sources of irritation was all that he ventured to do. He trusted the rest to proper regimen and dressings.

In the "Medical and Surgical History of the War of the Rebellion,"[7] it is stated from the immense experience of that contest, that

"cases of gunshot injury of the vertebræ were commonly fatal; yet a few examples were recorded in which the transverse or spinous processes only were injured, in which more or less complete recovery ensued, and fewer still in which the patients survived for a protracted interval, after fractures of the bodies of the vertebræ."

No instance of complete recovery after the latter injury was met with, and in those here alluded to,

[1] A Treatise on Gunshot Wounds. By T. Longmore, Esq., Philadelphia, 1862, pp. 76, 77.

[2] Plaies d'Armes a feu, par A-J. de Jobert, Paris, 1833, p. 123.

[1] Medical Record, 1867, vol. ii. p. 401. The italics here are Dr. Hamilton's.

[2] Military Surgery, edition of 1868.

[3] Medical and Surgical History of the British Army during the Crimean War, pp. 336, 337.

[4] Treatise on Surgery, vol. ii. p. 82.

[5] Military Surgery, pp. 514, 515.

[6] Op. cit.

[7] Part 1, vol. ii. p. 430.

the actual seat of the fracture was in every case doubtful. No *perforating* wound with recovery is mentioned at all.

Space will not permit a more extended consideration of this subject, but I may add that, in addition to the authorities already quoted, the excellent writings of Alcock, Ballinger, Bell, Bird, Chevalier, Clowes, Cole, Demme, Guthrie, Hall, Hutchinson, Longmore, Ranby, Thompson, and Williamson have been consulted, and with a similar result.

No undoubted instance of recovery after a compound comminuted or perforating gunshot fracture of the body of a vertebra has ever been recorded.

The explanation of this fact is apparent to every one who carefully considers the nature of such an injury, the grave and manifold dangers which encompass it, and the almost infinitesimal chance which the patient has, if he escape one or two of them, of avoiding them all.

In support of the foregoing statements, both as to the necessary fatality of the wound and as to the absolute correctness of the treatment in the President's case, it would be easy to adduce almost unlimited confirmatory evidence. The leading medical journals of the world have strongly and unequivocally upheld these views, and, indeed, it may be said that they have been maintained by every writer who has discussed the subject and who is entitled, by special study or experience, to speak with authority.

I shall confine myself now, however, to quoting the testimony of three eminent members of the profession in this country:

"Looking at the whole case, from beginning to end, I do not see that the treatment could have been altered in any way to the advantage of the illustrious patient; nothing was done that should have been omitted, and nothing was left undone that could possibly have been of benefit."[1]

"The President's surgeons did all that men could do; all that the present state of science would permit; and all that could have been done even if they had at first ascertained the course and direction of the ball. Our whole medical literature does not contain a single well-authenticated case of recovery from such a wound." "He had not the least chance of recovery under any circumstances or any treatment."[2]

"In reviewing the history of the case of President Garfield I can find no reason for adverse criticism of any part of the management."[3]

In conclusion it may be asserted that, after careful consideration and thorough search through the records of this and similar cases, and after the opportunity of deliberate comparison thus afforded, the following facts appear to be incontrovertible:

1. It was never possible at any time or by any method to ascertain definitely and safely the precise character and extent of the President's wound.

2. Any attempt in this direction further than was made by the attending surgeons would in all probability have resulted fatally at once, and their steadfast resistance to extraordinary influence in favor of operative interference entitles them to great credit.

3. The treatment, which was directed to meeting the indications as they arose, was in every respect that which it would have been necessary to adopt had it been possible fully to determine the exact nature of his injuries.

4. Life was prolonged for an unusually protracted period by the careful and skilful attention which the distinguished patient received.

5. Death resulted from the secondary effects of the wound upon structures far beyond the reach of surgical interference.

6. No undoubted instance of recovery from such a wound is to be found recorded in surgical literature.

No. 222 SOUTH SIXTEENTH STREET.

[1] Dr. John Ashhurst, Jr., in North American Review, December, 1881, p. 594.
[2] Dr. J. Marion Sims, Ibid., p. 600.
[3] Dr. John T. Hodgen, Ibid., p. 610.

THE TROPHIC SYSTEM AS A FACTOR IN PATHOLOGICAL PROCESSES.

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Read before the Pathological Society, April 28, 1882.

NOT long since, it was the prevailing notion to refer most or all pathological actions to an influence derived from the nervous system. About that time, the results of Waller's studies, and the remarkable observations of Mitchell, Charcot, and others, had thrown a new and brilliant light on the nature of the trophic nervous system, and the morbid conditions resulting from its perturbation. Now, germs occupy the first place in professional attention. It is true there is yet enough, and more than enough, of that mechanical humoralism which finds in the state of the vaso-motor system—in the variations in the vascular supply—ample explanation of all kinds of structural changes.

Since it has been shown that a mere relaxation of the vessels exists in the inflamed area, and that the condition leading to stasis and its consequences is purely local in the walls of the vessels, the active agency of the vaso-motor system in the process of inflammation must be denied. That certain parts of the nervous system have to do with the nutritive functions, and that a morbid state of these parts sets up structural alterations in distant but related organs, are facts also which must be maintained as ultimate and true. Waller first distinctly enunciated the proposition, that a nerve when separated from its trophic centre undergoes degeneration. Mitchell and his associates of this city, Charcot, Schiff, Erb, and many others, have shown that irritation of nerve trunks is followed by various changes in connected and dependent organs. It is useless, indeed, to be reaffirming so obvious a fact. Let me, however, as a groundwork of the statements to follow, give the anatomical data: Certain masses of gray matter appear to be the seat of the trophic influence. The large multipolar or caudate cells of the fourth layer of the gray matter, which constitute the psychomotor centre of the hemispheres, apparently are the trophic organs or centres for the fibres of the pyramidal tracts and probably of the brain in general, whilst the corresponding cells of the anterior cornua supply the trophic influence to the efferent fibres of

the spinal cord, and ultimately to the muscles and joints. On the other hand, the central and posterior portion of the gray matter of the spinal cord is related to the nutrition of the skin. The efferent nerve fibres stand in a similar relation to the parts supplied by them, so that when they are subjected to irritation degenerative changes occur in the same way as if the trophic spinal centres were affected.

Such is the anatomical basis of the trophic system. Is the trophic a separate endowment of these parts of the nervous system, or are the so-called trophic changes due to a state of the vaso-motor system? The answer to this question involves a consideration of the forms of lesions consecutive to affections of the supposed trophic centres, and of the vaso-motor system respectively. It will be most convenient to consider the vaso-motor system first. Broadly, there are two pathological conditions by which we may find this system affected: by irritation and by destruction of function, and their consequences. Irritation induces contraction of vessels, diminished functional activity of organs, and a depressed state of the nutrition of parts. When destruction is effected, function ceases, the vessels dilate, and a state of hyperæmia ensues. The results of irritation and destruction of function continue indefinitely without further mischief, although injurious effects may follow trivial causes. So far as the vaso-motor system is itself concerned, no changes of importance, no structural alteration follow mere irritation of its nerves or ganglia, or even destruction of them. A condition may be induced in either case in which great mischief is potential merely.

Beside the centres of vaso-motor innervation which exist in the medulla oblongata and in the cord, there are at various points in the arterial distribution local ganglia, which have the power to maintain the vascular tonus somewhat independently. Otherwise it would be impossible to explain the recovery of vascular tonus after the vaso-motor centres are destroyed, and that it does recover is a fact which has been abundantly demonstrated.

There are numerous anatomical and physiological data showing an intimate association of the vaso-motor with the trophic system. The vaso-motor centre in the medulla oblongata is connected with certain definite areas of vascular distribution in the gray matter of the hemispheres. This arrangement is called by Meynert a projection system. Irritation of the centre is followed by contraction of the vessels, and an anæmia of the associated vascular area. Now, as in the fourth layer of the cortex are situated the trophic cells, the importance of such an arrangement is obvious. Again, there are, according to Eulenberg and Landois, vaso-motor centres in the cortex—for destruction of such parts causes vaso-motor paresis and elevated temperature in the opposite extremities—facts which explain the presence or absence of temperature and other changes in the vessels of the paralyzed parts in hemiplegia.

The vaso-motor centres in the cord are connected with special vascular areas. Schiff, Brown-Séquard, and others, have found that injuries of the pons and medulla caused hyperæmia and ecchymoses of the lungs, pleura, kidneys, and the mucous membrane of the intestinal canal. Bernard, as all the world knows, caused albuminuria by irritating the upper part, and glycosuria by irritating the lower part, of the floor of the fourth ventricle. When the lumbar spine is injured, extravasations of blood take place in the suprarenal bodies. Injuries involving the vaso-motor centres in the spine are followed by changes in the temperature, and contraction or dilatation of the vessels of the paralyzed parts. In all of the cases of irritation or destruction of the vaso-motor centres, if the mischief is limited to them, and does not include the trophic centres, the resulting vascular changes do not involve alteration of the proper structure of parts. Besides variations in temperature, there may be excess or deficiency of certain glandular secretions, but no actual lesions of the gland elements. Obviously, the influence exerted by the vaso-motor innervation is quite inadequate to explain the changes which ensue when parts are separated from certain defined areas of gray matter.

When those areas of gray matter—distinctive in structure—supposed to have a trophic function are irritated or destroyed, results of a peculiar kind follow. When the fourth layer of cells in the gray matter of the hemispheres is injured, the fibres of the pyramidal tract undergo atrophic degeneration. Disease of the multipolar cells of the anterior cornua of the spinal cord causes not only paralysis, but rapid wasting and degeneration of the paralyzed parts, which exhibit Erb's phenomena of the reactions of degeneration. Various affections of the skin, falling out or abnormal growth of hair, deformities of the nails, pigmentation of the skin, erythematous and papulous eruptions, urticaria, herpes, ecthyma, etc., ulcerations, bed-sores, etc., are results of irritative lesions of the gray matter of the posterior columns, or about the posterior nerve roots. Whether the trophic influence proceeding from these parts is transmitted by a nerve fibre having this special function, or by the motor or sensory fibres, is unknown; but it is probable that the trophic centres of the anterior cornua, and of the posterior nerve roots, exercise their functions through the nerves proceeding from them respectively. That the trophic centres exist, there seems to be no possibility of doubt; that trophic fibres proceed from them having no other office or function, it is not necessary to affirm, for the motor and sensory nerves, which are subjected to the trophic influence, may readily take on the function. One of the two hypotheses is necessary, since ordinary motor and sensory nerves do not possess a trophic function.

What is the nature of the changes taking place in the trophic centre? Are they the results of irritation or of destruction of tissue and function? In progressive bulbar paralysis the ganglion cells of the gray matter of certain parts of the medulla, undergo a degenerative atrophy, in the course of which they disappear. There are other changes of minor importance: hyperplasia of the neuroglia, appearance of *corpora amylacea*, and of spider-cells so called, etc.; but the one lesion, is the utter destruction of the multipolar ganglion cells. The trophic influ-

ence thus withdrawn from the communicating nerve fibres, they also degenerate, lose their medullary sheath, their axis-cylinder disappears, and nothing finally remains but fibrous cords. In poliomyelitis, we find a similar trophic centre involved, and similar destructive lesions. Without occupying time with the intermediate lesions, it suffices to state that the special characteristic of the alterations is the disappearance of the multipolar ganglion cells of the anterior cornua. The connected nerves exhibit corresponding changes, undergo degenerative atrophy, and become little more than connective tissue cords. The muscles in the case of the destructive lesions of the trophic masses also waste rapidly, their proper anatomical elements disappear, being replaced by fat and connective tissue. The effects in the osseous system are still more extensive and profound. In tabes, typical examples of the joint changes, due to lesions of the trophic cells, are described by Charcot in his lectures. So long ago as 1873, Weir Mitchell announced the dependence of bone nutrition on the affection of these trophic cells in this disease, and the occurrence of an abnormal brittleness leading to ready fracture. Peculiar joint affections also occur in connection with cerebral softening, and in certain insane, ribs fracture so readily that, in a trivial struggle with an attendant, one or more may be broken.

The cutaneous trophic lesions, secondary to changes in the gray matter about the posterior nerve roots, are in a high degree interesting and important, and furnish us with illustrations of the differences between irritation of the trophic centre and its connected nerves, and destruction of function. Furthermore, cutaneous trophic lesions are closely associated with vaso-motor derangements, indicating thus the probable situation of the vaso-motor centre in the spinal cord. The trophic centres for the skin communicate with their end-organs by the sensory nerve fibres. In destructive lesions of these centres, the proper structure of the skin disappears, and if repair occurs it is only by cicatricial tissue. In the simplest functional disturbance of the trophic centre for the skin, the most transient effects only are discoverable, and the proper structure of the skin remains untouched. There would then seem to be a constant relation between the central and peripheric affections. When there is a mere functional disturbance of the centre of trophic influence, there occurs only trivial transient skin affection; when there are destructive lesions of the trophic centre, lesions of structure occur at the periphery. Let us see whether these postulates are supported by facts.

Erythema of a few minutes' or hours' duration, urticaria equally fugitive, and some transient cases of herpes, occur from functional irritation of the trophic centre. Herpes zoster, of more or less severe character, is caused by more violent irritation of a sensory nerve charged with a trophic function. Herpes zoster may also appear in connection with destructive lesions, but in that case there occurs irritation of nerves of temporary duration, and therefore merely an accidental fact, as, for example, the attacks of zoster succeeding to the severe pain of locomotor ataxia. Ecthyma and pemphigus, leading to deep ulcerations of the skin, bullæ penetrating deeply and healing by cicatrix, leucoderma, bronzed skin, etc., are results of destructive lesions of limited extent. Still more significant are the bed-sores, with extensive sloughing, occurring suddenly after a severe spinal or cerebral lesion. In such a case we have exhibited sudden destruction of trophic centres, followed quickly by equally destructive peripheric lesions. No doubt extreme vaso-motor depression coincides with the changes in the trophic centre in such examples.

It is important to ascertain whether in the circuit of trophic action, a disturbance—irritation or destruction of function—at any point will affect the nutrition, or cause lesions elsewhere in the circuit. We know that a disturbance in the trophic centre, and its efferent fibres, will be perceived in changes at the periphery. Does the converse hold true? There are facts, experimental and clinical, which tend to show that destructive lesions of the end-organs, cause more or less profound changes in the circuit of trophic influences. Injuries of nerves set up an ascending neuritis, which is only limited by the termination of the connected elements. Friedreich has brought forward a mass of testimony to prove that the profound changes in progressive muscular atrophy are due to an ascending neuritis, beginning in the intra-muscular nerves. Although in this disease the initial change is, by the great majority of observers, located in the multipolar ganglion cells, the facts showing the mode of an ascending neuritis, and the final alterations wrought in the trophic centre, have a high degree of importance in this connection. A clinical fact of immense suggestiveness is the occurrence of ulceration of the duodenum in cases of extensive burn on the chest or abdomen. Very recently I have seen a case of herpes zoster occupying the whole distribution of the right cervical plexus, which was secondary to an attack of hepatic colic, during the course of which there occurred seven distinct paroxysms, due to the passage of as many calculi, proved by their recovery from the feces. The path by which the trophic disturbance was produced was by the solar plexus, the trophic centre in the cervical cord, and the sensory fibres with trophic function of the cervical plexus.

We may now, I think, attempt to apply the principles of trophic action to the pathological states of various organs.

In the cerebral cortex—a collection of psycho-motor centres—there is also a centre with a trophic function. There can be little doubt, I think, that such depressing emotions as anxiety, chagrin, and grief, exercise an inhibitive influence on the trophic centre, and lead to changes in the cerebral structures and in the mental sphere. To such influences must we refer the early occurrence of senile changes, atheromatous and calcareous degenerations, etc. As in the case of certain joint affections which occur during the course of chronic destructive changes in the trophic centres of the spinal cord, and in which the local inflammation is produced by the urate of soda that collects about the joint, so in certain cere-

bral states the calcareous salts are abundantly deposited in the brain.

Injuries of certain parts of the brain are followed, as we have seen, by changes in the thoracic organs. Brown-Séquard has made the observation that pneumonia is apt to occur during the existence of disease in the right hemisphere.

The facts showing the influence of the abdominal organs on the brain, and reciprocally, are numerous and important. Of course, I now only have in view the trophic influences. The frequent and persistent occurrence of stomachal vertigo and of migraine is of evil omen, since such subjects, as a rule, suffer early degenerative changes in the brain. The Hippocratic notion, which associated a depressed state of the cerebral functions with hepatic disorder, was not far wrong. Injury of various parts of the brain and cord, of the splanchnics, and of the sciatic, may cause glycosuria. Implication of the fibres of the solar plexus, with ultimate destruction of their anatomical elements, is the chief, if not the only, factor in the development of the bronzed-skin disease. An important contribution to the pathology of Bright's disease was made by Prof. Da Costa and Dr. Longstreth when they discovered the profound, degenerative changes in the renal ganglia. Albuminuria is also caused by injuries which involve certain cerebral trophic centres. Injuries involving the splanchnics and the ganglia of the abdominal sympathetic, by paralyzing the vaso-motor fibres, cause swelling of the liver and spleen, and the opposite state is the result of merely irritative action. When to the circulatory disturbances is added the trophic, structural changes quickly follow.

There is a practical question connected with the subject of trophic influences, so pertinent to the subject in hand, that I cannot fail to allude to it here: that is the question of counter-irritation. I have mentioned the fact that, after severe burns of the chest or abdomen, ulceration of the duodenum occurs in a considerable proportion of the cases; and under the same circumstances, an acute pneumonia or pleuritis may develop. These are pathological experiments of deep significance. We have a right to conclude, from the facts which I have submitted, that the injury in the case of the burn so depresses the functions of the trophic centre that some one of the results mentioned may occur. A large blister, allowed to draw thoroughly, has the effect of a burn. The end-organs of the sensory nerves in the skin are injured, and the trophic centre is depressed. We are aided here in coming to a right conclusion by the results on the urinary secretion of a succession of blisters to the joints in rheumatism. It is, of course, known to all here present that under such circumstances the urine, from being acid, becomes neutral or alkaline. We are further helped to a decision by the observations of Vulpian and others on the effect of injury to afferent nerves on the centre to which they proceed. We cannot localize to the point of injury the mischief done to a nerve, for it passes up through its whole extent to the gray matter. Blisters, large and long in action, are therefore proper only when the functions of the trophic centre are to be lowered. To this might be added, also, when the vaso-motor system is to be depressed. Conversely, transient irritation causes reflex contraction of the vaso-motor fibres, and excites the trophic system to acts that involve function only.

The facts recently discovered by Brown-Séquard in regard to the effect of chloroformic and other kinds of irritation of the skin on the functions of the brain and spinal cord, and the changes in the nutrition of the heart which follow injury to the vagi as demonstrated by Wassilieff, are further evidences of a convincing kind that far-reaching consequences flow from peripheric irritation of the trophic centres.

From every point of view, then, the trophic system has an important place as a pathological factor. I can only regret that I have been unable to add any new facts. Inferences based on facts are, however, not without utility, and these I submit to your reflection.

HOSPITAL NOTES.

JEFFERSON MEDICAL COLLEGE HOSPITAL.

RAPID LITHOTRITY.

(Service of PROF. S. W. GROSS.)

WE recently had an opportunity of witnessing two cases of Bigelow's operation in the hands of Prof. S. W. Gross. In the first case, occurring in a man twenty years of age, an oxalate of lime calculus, the fragments of which weighed two drachms and a half, was crushed in one hour; and in the second case, that of a man twenty-seven years of age, an uric-acid calculus, the fragments of which weighed one hundred and thirty grains, was removed in forty minutes. In the former, previous preparation of the patient was unnecessary, while in the latter, a stricture behind the meatus required division, and the sensibility of the urethra was obtunded by means of large conical steel bougies, employed for several weeks previously. The only medicine administered after the operation was a single introduction of one-third of a grain of morphia under the skin. In both cases there was merely a slight soreness in the bladder, with the passage of faintly bloody urine for forty-eight hours; and the patients were discharged on the fifth day.

The instruments employed were Bigelow's improved lithotrite, measuring 29 mm. around the heel, and provided with solid blades, of which the female has a long, curved, and blunted toe, and a No. 29 straight evacuating catheter. They were found to be easy of introduction, and they fulfilled perfectly the indications for which they were designed.

MEDICAL PROGRESS.

SEPTIC ENDOCARDITIS.—PROF. LEYDEN, writing on this interesting subject in the current number of the *Zeitschrift für klinische Medicin*, draws attention to the frequent resemblance of the temperature curve in this disease to that of intermittent fever, a resemblance that has been many times noted by others. He distinguishes clinically four groups of cases as follows: The first group includes those cases in which the endocarditis forms part of a pyæmic or septic process. This is best known in connection with puerperal septicæmia, in which ulcerative (infectious parasitic) endocarditis is not infrequent. It is also sometimes met with in septicæmia and phlebitis following injuries.

Leyden observed one such case complicated with abscess of the liver. In these cases of endocarditis, pyæmic or septic *par excellence*, the cardiac condition is part of a wide-spread septic process, and the rigors occurring in the disease may be symptomatic of the general sepsis, quite as much as of the endocarditis. In his second group he places those cases of endocarditis which are marked by a more or less intense and irregular pyrexia and erratic rigors. Traube has recorded such cases, so has Litten. Volmer relates one in which typhoid symptoms ushered in the attack, then rigors occurred, and the diagnosis of endocarditis was made. Leyden remembers one such case in Traube's clinic where a correct diagnosis of pulmonary valvular insufficiency was made, the endocarditis being accompanied by an irregular intermitting fever. The third and fourth groups comprise cases in which the temperature-curve corresponds, more or less closely, to that of intermittent fever with periods of paroxysmal exacerbation, alternating with apyrexia, sometimes for a short period, regularly quotidian and tertian in type. In the third group he places those cases in which the signs of cardiac disease are ill-marked, or even in abeyance until near the close of life; whilst in the fourth he describes those cases where heart disease has been long established, the intermitting fever arising as a final complication. He gives details of four such cases, and ascribes the issue to the supervention of some septic influence, sometimes ascertainable, and confirmed after death by the presence of mycotic organisms in the vegetations, and secondary emboli. It may be added, as an interesting historical fact, that Leyden states that he has been unable to find records of these types of fatal endocarditis among older writers. This we believe is quite true, and in the face of the very striking clinical manifestations is a little remarkable, and not wholly to be explained by the absence of thermometric observations. It is more than likely that some cases known to our forefathers as malignant ague really belonged to this class of disease, although even Morgagni, who faithfully describes post-mortem appearances in association with clinical facts, gives no case that would now bear this interpretation.—*Lancet*, May 20, 1882.

Aural Vertigo.—In a paper read by Dr. C. H. Burnett before the Philadelphia County Medical Society on this subject, the following conclusions are drawn:

1. That there are two sets of fibres in the auditory nerve—viz., the sensory and the motor.

2. That the motor filaments are connected on one side with the cerebellum by means of the inferior peduncles, and on the other side with the nerve-filaments sent to the ampullæ of the semicircular canals.

3. That irritation of these ampullar nerves may be conveyed from either of the three parts of the auditory apparatus, or from the auditory nerve itself, in the mechanical form of pressure, and that this irritation may be further conveyed to the cerebellum and cause vertigo: so that it logically follows that this reflex cerebellar phenomenon as produced by aural irritation should receive the general denomination of *aural vertigo*, and that Ménière's disease is only a form of aural vertigo. Hence the latter name, unless used after accurate diagnosis of a disease originating in the labyrinth, *i.e.*, in the semicircular canals,—will create confusion. —*Philadelphia Med. Times*, June 3, 1882.

Coexistence of Scarlatina and Vaccinia in the Same Subject.—The simultaneous development of two eruptive fevers in the same individual has been doubted by the most eminent clinicians, while others, such as Roger and Bergeron, on the other hand, have claimed to have demonstrated its possibility. Dr. Fabre publishes a report of a case, which confirms the latter opinion, in which scarlatina developed on the twelfth day of vaccinia, and pursued a normal course. The two exanthemata developed simultaneously in the same subject, and furnish, therefore, an incontestable refutation of the theory of the incompatibility of simultaneous morbid processes as originally maintained by Hunter.—*L'Union Méd.*, April 30, 1882.

Elongation of the Nerve in Sciatica.—Reporting on some cases of elongation to the Société de Chirurgie (*Union Méd.*, March 14), M. Gilette observed that while stretching of nerves for locomotor ataxy, epilepsy, and other affections of the central nervous system, has furnished no decisive results, it has in neuralgias, and especially in sciatica, proved of indubitable service. M. Gilette has performed some experiments on the dead body for the purpose of estimating the amount of traction requisite for the production of the necessary distention of the nerve without causing its rupture. The force required was tested by a dynamometer placed in the axis of traction. Forty-five experiments were performed at Bicêtre on a series of twenty-three bodies. From these he arrived at the conclusion that, to produce stretching, never more than twenty kilogrammes of force should be employed, and that it would be better to keep even below this. If force above twenty kilogrammes were employed, there would be risk of causing the rupture or the detachment of the nerve. M. Berger, however, was of opinion that the valuation of the force of traction by means of the dynamometer did not furnish an absolute guarantee, the intensity of the force being modified by various circumstances, among which was the adhesion of the nerve to its sheath. In the experiments which he had performed at the Charité, M. Berger had found that for the production of the small crepitation which indicates the limit that should not be passed in stretching, a very variable amount of force is required. In a young and healthy subject he found that he was obliged to draw with all the force of one hand in order to produce this crepitation. M. Gilette observed that he considered fifteen or sixteen kilogrammes as the amount of force that may be employed without danger.—*Med. Times and Gaz.*, May 27, 1882.

Properitoneal Hernia.—Dr. C. J. Rossander, in *Hygeia* for 1881 (*Nord. Med. Arkiv*, Bd. xiii., Häft 3), gives a brief account of two cases of properitoneal hernia which he has been able to find in medical literature, and adds a case which came under his notice. The patient, a woman aged forty-three, had, for more than ten years, had a crural hernia, which could never be completely reduced. Her distress at last became so great that she desired to be submitted to operation, which was accordingly performed under strict antiseptic precautions. As, after the sac had been opened, the hernia, which was only omental, could not be reduced, the case was suspected to be one of properitoneal hernia, and the suspicion was confirmed by closer examination. A diverticulum, an inch long, extended upwards from the hernia, in front of the peritoneal layer of the abdominal wall. The opening between the sacs having been enlarged, the whole mass was reduced. The anterior and posterior walls of the hernial sac were then sewn together as accurately as possible, and the external wound was closed. A small collection of pus was observed on the seventh day; but it interfered little with the process of healing. —*London Med. Rec.*, March 15, 1882.

Dislocation of the Lachrymal Gland.—Dr. Simeon Snell reports the following unusual case. On March 7, he was consulted by a tradesman, aged 45, in

consequence of a "lump" he had noticed in the left upper eyelid. It had first been observed a week previously, and he had later on seen his own medical attendant, Dr. Bourke. The swelling he mentioned was now distinctly visible, but was particularly noticeable to the touch. Situated in the upper eyelid at its external part and coming from under the frontal bone, it was felt beneath the structures of the lid as about the size of an almond. It could be pressed between the fingers, but readily slipped back into the orbit; its surface felt more smooth than irregular. Pressure caused it immediately to recede into the orbit beneath the frontal bone, but after depressing the head it was again found to be visible in the lid. This he had himself observed before, and after several attempts to replace it, he always found on bending the head downwards that it had reappeared. He complained of it as causing him discomfort, which manipulation increased.

On the night before the first appearance of the substance in the lid the patient had gone to bed ailing nothing, and had detected it on rising in the morning. He had during the night been coughing a good deal.

The same side of the head is marked by a large venous subcutaneous nævus, which extends to the eyebrow and apparently passes into the orbit. The man is a free drinker, and is frequently laid up in consequence.

The question as to what the "lump" was did not present any great difficulty. Its situation, size, and feel suggested directly its being the lachrymal gland displaced, and this, it may be added, was the diagnosis formed by the medical man by whom the patient was first examined.

It was decided in the outset to see what effect compression would have in keeping the gland replaced. A few days later the patient came for the purpose of commencing this treatment, but for some reason or other desired to postpone wearing a "pad" for a short time. At this visit, however, the gland was pressed well back with the finger, and kept replaced. He left without its having reappeared. Being soon afterwards laid by with one of his attacks of illness, he did not again come until five or six weeks later. The swelling in the lid was then no longer visible, and he asserted that it had not appeared since his last visit, and that he had lost the sense of discomfort previously complained of.—*Ophthalmic Review*, June, 1882.

Resection of the Ankle.—Dr. Poinsot, of Bordeaux, reports in the *Rev. de Chir.*, No. 10, 1881, a successful case, under his own care, of tibio-tarsal resection, and endeavors to show by tables of collected cases that this operation, when performed for the removal of disease, gives most satisfactory results, the mortality of the operation, according to these tables, being almost nothing, and the proportion of failures not higher than fifteen per cent. When other modes of treatment have failed, and when the fungoid process has destroyed the spongy tissue of the epiphysis and tarsal bones, and when suppuration has taken place, and fistulous communications have been established between the interior of the joint and the surface of the limb, is it not better, the author asks, to reset the diseased bone than to wait until the progress of the disease will have rendered amputation the only resource? There can be no doubt that tibio-tarsal resection, though generally allowed to be of great value in cases of severe injury to the ankle, has, as a resort in cases of disease of this joint, long been out of favor both in France and in this country; the main grounds of objection to the operation being the duration of the after-treatment and the frequency of relapse, and also the functional unfitness of the extremity, in consequence of its shortening and of deviation of the foot. Dr. Poinsot, struck by the excellent results of the operation in his own case, was led to determine, by a study of Spillmann's tables, published in 1869, and of a collection made by himself of subsequently recorded cases, whether the objections to pathological resection of the ankle were really well founded. In thirty-four cases, collected by Spillmann, the proportion of deaths was over 25 per cent., and of failures about 40 per cent. The conclusion drawn by Spillmann, from this collection of cases, was that tibio-tarsal resection, for pathological affection of the ankle, is a very hazardous operation, not so much by reason of its mortality, as on account of the subsequent tendency to relapse. In a collection of thirty-two cases, published by Hancock, in 1873, twenty-eight of which had not been included in Spillmann's tables, better results were shown, the mortality being about 18 per cent., and the proportion of failures about 25 per cent. Dr. Poinsot's table, which includes forty-two instances of tibio-tarsal resection, in most of which the operation was performed after the date of Hancock's record, shows about the same proportion of failures, 25 per cent., but a much reduced mortality, four cases only having been fatal. An attempt is made, by a further analysis of these forty-two cases, to test the influence of Listerism in pathological resection of the ankle. In twenty-one cases that were treated after the operation by Lister's dressings, there were three cases recorded as unsuccessful (14.28 per cent.). In one of the successful cases of this series, the astragalus, os calcis, scaphoid, and also some portions of the metatarsus were removed.—*London Med. Record*, March 15, 1882.

A New Ptosis Operation.—The insufficiency of operations hitherto proposed for the relief of complete or nearly complete ptosis, with little or no power in the levator, is well known. Pagenstecher (*Arch. f. Augenheilkunde*, xi. 2. *Centralblatt f. pract. Augenheilkunde*, April, 1882) has devised an operation which depends for its effect on bringing the frontalis to act directly on the upper lid, and thus substituting the action of this muscle for that of the levator. This is accomplished by producing a superficial vertical cicatrix connecting the frontalis with the edge of the lid. A needle is entered about a finger's breadth above the supraorbital ridge and carried downward beneath the skin to emerge at the level of the lashes; a thread is drawn through, and the ends tied together without much dragging. Each day the thread is pulled on till it finally cuts its way out. The reaction is very moderate; the disfigurement caused by the scar is very little, and much more than made up for by the improvement in appearance obtained by relief of the ptosis. Pagenstecher has found one suture suffice in the cases operated on, but suggests that two may sometimes be necessary. For incomplete ptosis a modified form of procedure is advised. A thread armed with two needles is used. One needle is passed under the skin of the lid, parallel to and near the lashes, for a distance of one or two millimetres, drawn through, reëntered at the point of exit, and carried upward beneath the skin to a finger's breadth above the supraorbital ridge. The other needle is then carried from the point where the first needle entered, also upward, to emerge at the same place as the first, above the brow. The two ends of the thread are drawn moderately tight and fastened. The loop thus formed may be removed after a longer or shorter time, or allowed to cut itself through, according to the indications of the individual case, and in this way a wholly subcutaneous cicatricial cord is produced. Care should be taken not to sink the needles so deeply above the brow as to wound the periosteum, lest a connection between the skin and periosteum might occur and prevent movement of the vertical cord.—*Boston Med. and Surg. Journ.*, June 1, 1882.

THE MEDICAL NEWS.

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OF MEDICAL SCIENCE.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will be liberally paid for upon publication. When necessary to elucidate the text, illustrations will be furnished without cost to the author. Editor's Address, No. 1004 Walnut St., Philadelphia.

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SATURDAY, JUNE 24, 1882.

IN closing the first volume of our weekly issue we have the pleasure of offering to the medical public our best thanks for the extremely liberal support which it has awarded us.

Believing that the profession in this country stood in need of a weekly periodical which should be national in scope and cosmopolitan in character, which should correctly represent professional opinion and advocate a high standard of professional morals, which should be unbiased by sectional interests, and be worthy of the support of the whole medical community, we undertook to meet the want, and six months ago issued the first number of the *weekly* MEDICAL NEWS.

How completely and satisfactorily the broad scheme then mapped out has been fulfilled our readers are best able to judge. That the want existed is probably best proved by the continued large accessions to our subscription list, the rapidity of the growth of which we can confidently state is unprecedented in the history of medical journalism.

How fully the national scope of THE NEWS has been attained is shown in the following table of the geographical distribution of our subscription list; the perusal of which may not be without interest to our readers and contributors.

New England and Middle States,	30	per cent.
Southern and Southwestern States,	33	,,
Western States,	30	,,
The Territories,	2	,,
The Dominion of Canada,	2.5	,,
Foreign Countries,	2.5	,,

A detailed study of this list shows that the circulation of THE MEDICAL NEWS extends into every State and Territory of the United States, into every province of the Dominion of Canada, and into England, Scotland, Ireland, France, Belgium, Germany, Italy, Russia, Turkey, Bulgaria, Roumania, West Africa, India, Japan, China, New Zealand, Trinidad, Cuba, Mexico, Central America, Venezuela, Brazil, Chili, and Ecuador.

In expressing our gratification at the large measure of success which has been attained within so short a time, it is our pleasure, as well as our duty, to state that it shall continue to be the highest ambition of THE MEDICAL NEWS to be worthy of the position it holds and of the profession it represents, and that it may ever be relied upon as an earnest supporter of professional honor, and an uncompromising opponent of quackery in all its myriad forms.

THE DEFENCE IN THE MALLEY CASE.

THE usual spectacle of opposed experts has not been wanting in this celebrated trial. On the question of drowning, and the *rôle* of arsenic in the case, Dr. Pliny A. Jewett testified on behalf of the defence. He was severe on the mode in which the autopsy was made, and on the conduct of the chemical investigation. Any apparent carelessness on the part of experts, whereby the lives of accused persons are placed in jeopardy, has an immense influence over the minds of Court and jurors. Dr. Jewett found fault with the attempt to decide on the question of drowning after Jennie Cramer's body had been moved some distance, turned over repeatedly, undressed, washed, etc. He disapproved of the dark room or morgue, where the autopsy was made, of the manner in which the body was examined and parts of organs removed, and of the careless handling of such pieces in the undertaker's establishment, which was shown to contain jars of a disinfectant fluid, of which arsenic was a constituent. Although much of this had little relevancy, and some points were disproved, it is material of a damaging kind in the hands of skilful attorneys. Such an incident affords an instructive lesson, and illustrates the kind of care necessary to experts in the conduct of such investigations.

The question of the mode of dying, whether by drowning or by arsenic, had an important bearing on the case. For if by the latter, as it seemed probable, the body was afterwards thrown into water. The absence of water in the lungs or stomach, especially of the kind in which the body had been immersed, afforded a strong presumption against the theory of drowning; but Dr. Jewett successfully confounded this by introducing the objection that the way in which the body had been handled previously to the autopsy would effect the entire removal of any fluid in these organs. Such an objection

may, or may not, be valid; but it serves the intended purpose; it introduces a strong element of doubt, which, under these circumstances, is more effective than mere evidence in rebuttal.

Although the presence of arsenic in the body of Jennie Cramer was not denied, various distrustful circumstances were ingeniously manipulated to discredit the facts of the prosecution. The manner in which pieces instead of whole organs were removed, the presence of an arsenical fluid in the undertaker's morgue, and the absence of inflammation in Jennie Cramer's stomach, were the doubtful circumstances to which Dr. Jewett testified. In regard to the last-mentioned fact, the witness admitted, on cross-examination, that there were cases of poisoning by arsenic in which no inflammation of the stomach existed. These exceptional cases are products of several factors—of the form in which the poison is taken, of rapid absorption and prompt action, and of a peculiar impression on the nervous system, probably the result of a special susceptibility. It is a recognized fact that some states of the nervous system favor, and other states retard or prevent, inflammation. In a large proportion of cases, arsenic, absorbed from any point, will excite inflammation of the stomach: it has, in others words, "a selective action" on this organ. But in certain other cases this symptom is conspicuous by its absence, and there occurs instead a condition of profound depression of the nervous system. There had been no evidence offered in regard to the symptoms produced by the toxic dose, and hence the objections submitted by Dr. Jewett have great force.

We miss, in the recital of the testimony for the defence, the usual references "to arsenic eating." There is no attempt to show that Jennie Cramer had used arsenic "to improve her complexion," or that she had imitated the practices of the arsenic eaters of Styria, who add to the ordinary enjoyments of life the pleasures derived from the daily consumption of the poison. That there are arseniphagi can no longer be doubted. Beginning early in life, certain mountaineers of Styria, finally use daily an incredible amount of arsenic, and so long as they continue their daily allowance suffer no inconvenience, but are poisoned on attempting to discontinue it. The motive which induces the arsenic habit is found in the increased breathing power, the greater muscular strength, the exhiliration of mind, and improved personal appearance produced by this agent. That poisoning should ensue on discontinuing the arsenic is a statement which makes a large draught on our credulity; but as the proofs of this are satisfactory, this fact serves an important purpose in confusing the jury. This habitual use of arsenic in large doses must have had an embarrassing effect on Dr. Jewett's position regarding the corrosive action of this agent on the stomach. Maintaining as he did the constancy of inflammation of the stomach as a result of arsenic in toxic doses, how can he reconcile this position with the experience of the Styrian arseniphagi? The numerous physiological experiments afforded us in their use of arsenic, serve to confirm that view of the action of this agent which refers it to the nervous system. Although the selective action on the stomach is usual, it is by no means invariable; and it is also true that it profoundly modifies, in some way, the nervous system, causing coma and insensibility when the stomach escapes injury.

EARLY OVARIOTOMY.

THE ophthalmic surgeon often and rightly declines to operate at once, but waits till a cataract is "ripe." To a very large extent the same feeling has been prevalent in reference to ovariotomy. So long as the patient was fairly comfortable, it was deemed best to temporize, and only when life was seen to be in real and not far distant danger was it deemed proper to urge the operation.

When the dangers of the operation were very great—so great that the removal of the tumor meant a very serious possibility, if not even probability, of death — such a view was eminently just and proper. But "*nous avons changé tout cela.*" The death-rate has fallen steadily from one-half to one-quarter, one-eighth, one-tenth, and, in exceptions, to one-twentieth, or even less. In view of this, we can justly urge our patients to submit to operation with far greater confidence of their recovery. The dangers of action are less than those of delay. Fabius must give place to Scipio.

We are glad to see that Granville Bantock has put forth "a plea for early ovariotomy." His reasons are not only good, but, unless there be technical and valid *a posteriori* arguments against them, they commend themselves, *a priori*, to good common sense. The general health, he argues, yields in time, and imperils the result the more the longer we wait. The tumor works mischief in other organs, not seldom resulting in structural disease. Such accidents to the tumor as rupture, etc., may occur and imperil life; and even if none of these untoward results follow, yet, the longer the delay, the greater the probability of adhesions, which, growing both in extent and in strength, entangle other organs in the meshes of disease, and complicate the operation and add to its dangers.

Per contra, the earlier the operation, the simpler and the safer; as is shown by the tables he adduces in support of his plea.

Who delays in other tumors, even such simple ones as lipomata? Who desires them to involve a greater number of neighboring organs, such as bloodvessels,

muscles, and nerves? Who waits till the wound shall be larger, the raw surface greater, the septic dangers more numerous? Who delays till firm adhesions form? And, if we thus reason in the simpler cases, why not here? If outside the abdomen, why not within it?

Now that the only valid reason for delay—the serious danger—has been eliminated as a potent factor in the problem, we believe with Bantock that early ovariotomy ought to be the rule and soon will be. When such a tumor is certainly recognized, it should be removed, and removed at once. Delay will not simplify but only complicate; not lessen, but increase, the danger. The tumor will not shrink, but will grow; will not isolate itself, but fasten itself with a firmer grip. But one thing will do any good—the knife.

THE REDUCTION OF OLD HERNIÆ.

ORDINARILY an old and large hernia is left pretty much to itself. Palliative measures alone are attempted. Yet the positive and continuous inconveniences remain, sufficient in many cases to render life a burden, and should be a constant incentive to renewed efforts. M. Thiry, in the *Bulletin de l'Académie Royale de Belgique*, has lately shown us what may be justly called a new method of dealing with such tumors, by frequently repeated attempts at the taxis with compression during the intervals.

The patient was a man of forty-two, whose hernia measured sixty-seven centimetres in circumference. The intestines had "perdu droit de domicile" in the abdomen and were all in the scrotum, and produced a considerable dysuria. Undismayed by the size and age of the hernia, M. Thiry repeated the taxis twenty-four times, at unequal intervals extending over nearly three months. At each sitting more or less of the hernia was reduced, and, once reduced, was retained in place by an elastic bandage. After complete reduction, a truss with a very convex pad penetrating into the ring was applied. At the end of some months, the reduction was still effectual, the abdomen had resumed its usual rotundity, and urination was readily accomplished. Life had again become desirable.

We commend so happy a success to our readers. Old herniæ are so frequent and so annoying that he who opens a new path to their successful treatment confers a great boon on multitudes of sufferers.

Of course, in very many cases the adhesions are such as to forbid the hope of success. But no such hernia should be abandoned without at least patient and repeated trials.

SYPHILIS IN LIFE INSURANCE.

AFTER an extended study as to the influence of syphilis on the duration of life, and, therefore, on the acceptability of syphilitics to life insurance companies, Dr. Mireur, of Marseilles, reaches some very sensible conclusions. The very presence in the application of the question whether the applicant has had syphilis, deters not a few persons from applying for insurance, since the questions and answers of the application are copied in the policy, and this may come under the eye of wife or widow at any moment. Moreover, in 90 per cent. of the cases (and we would possibly place it even higher in this country, for very few bad syphilitics apply) syphilis has no direct and positive influence on the duration of life of the applicants, and hence should not be a bar to insurance. In any case in which its influence is at all likely to enter as a serious factor, a fairly well educated and sharp-eyed examiner will almost inevitably detect the existence of the disease.

In view of these facts, he advises the omission of this question from the application, and the introduction of a general question relating to the disease in the medical examination alone. Of course, all severe cases of syphilis should, as a rule, be rejected, but slight or even moderate syphilis, if treated properly, he would not regard as an absolute barrier.

A CLINICAL THERMOGRAPH.

WHILE it is usually only necessary to obtain the morning and evening temperatures, cases sometimes arise in which for a part or the whole of the twenty-four hours it is desirable to have a continuous record of the temperature. Especially is this valuable in the scientific study of certain cases. We notice that Mr. Bowkett, of the Leeds Fever Hospital, has devised for this purpose a clinical thermograph which seems to promise well. It consists of a circular disk, with a series of concentric circles for differing degrees of heat, and twenty-four radii for the twenty-four hours of the day. This disk revolves by clock-work once in the twenty-four hours, and on it a lever traces a curve, varying in height according to the temperature. The cost of it is 5£.5s.

It can never replace the ordinary thermometer, for the continuous wearing of any apparatus, even on the abdomen, is practically out of the question. Moreover, the present form of apparatus does not allow of its being placed in the axilla or at any other point where it will be surrounded by the tissues of the body, and hence its record is not strictly accurate, though very nearly so.

With the proverbial inventive genius of our American medical men, these difficulties ought to be overcome, and a still more serviceable instrument be given to the profession, for such a thermograph is a real need.

We should hope also that it would not be patented, as we regret to see is the case with Mr. Bowkett's, whether by him or by the manufacturers we do not know.

THE LAST DEFENCE OF THE NEW YORK CODE.

THE *New York Tribune*, of the 16th inst., publishes an interview with Dr. C. R. Agnew, one of the Committee that framed the New York Code. For illogical reasoning and contradictory statement it is almost as monumental as our recent extracts from the *Medical Record*. He has one virtue at least: he is not afraid to speak.

Dr. Agnew says, the New York Code "gave permission . . . . to consult with legally qualified practitioners," whereas previously they "had been debarred from consulting with practitioners whose practice was based on an exclusive dogma." Yet, strange to say, he adds, a few lines further down, the remarkable statement, that "the friends of the new Code have no desire to consult with homœopaths, or eclectics, or any other practitioners differing radically from them in their ideas of treatment."

Why, then, did they adopt the new Code?

"They have been almost universally staunchly loyal to the old Code, and would have continued to obey its mandates."

Why, then, did they destroy it?

But lo! a reason! The old Code "limited the influence of the regular profession in securing sanitary and other legislation to protect the public." With singular infelicity of illustration, he then points to the registration law of the State of Illinois to show "how, in the operations of the new Code, medical men may exercise their power to protect the public against medical tramps and quacks." Yet the profession in Illinois, under all the "restraints" of the old Code, has passed a law which even the apostle of the medical reformation rightly points to as a model.

What, then, is the use of the new Code?

Dr. Agnew has even greater surprises to follow. He speaks of "the medical profession [*i. e.*, regulars, homœopaths, eclectics, Thomsonians, etc.] united as under the revised Code . . . . on the basis of legal qualifications." He defines a "regular" physician as one who is legally qualified to practice, and warns us not to call others "quacks," lest we be sued for libel.

"Under the old Code, every man was on the same footing, just as in the trade-unions wages are fixed for all operators alike," which is the first intimation we have had that Dr. Agnew's charge for a cataract extraction is the same as that of last spring's callow doctor, and that under the old Code it could not be greater.

The State Society, he thinks, "will not rescind its action, but will go a step further," and adopt a resolution refusing to discipline any member except for offences "unworthy a physician and a gentleman." We are not Old Probabilities, or even a medical Vennor, but we should be willing to put in the medical almanac for February, 1883, "about this time look out for a whirlwind."

EXPERTS IN COURT.

A REPORTER making merry over the incidents in the Malley trial, describes, amongst other events, "Prof. Moses D. White, of Yale College, who sat near the District Attorney taking copious notes preparatory to coaching him in a cross-examination." There is implied in this an impropriety. A little reflection should convince any intelligent person of the injustice of such aspersions. How can the District Attorney get the necessary information on the various medical questions involved? Ought he not seek the information from those qualified by education and training to furnish it? Lawyers have, hitherto, been rather chary in asking for the necessary information, and have preferred to blunder through the testimony rather than apply for the knowledge that would have enlightened them. It is a hopeful indication when we find medical experts in court rendering the aid which they alone can furnish to the counsel on both sides. This is, however, a question apart from the employment of experts to testify on medico-legal points for the enlightenment of the jury. Such an expert should not be in the position of a partisan, or of a paid advocate, but rather as a scientific authority expressing the latest teaching of science on the question at issue.

REVIEWS.

A MANUAL OF OBSTETRICS. By A. F. A. KING, M.D., Professor of Obstetrics and Diseases of Women and Children in Medical Department of Columbian Univ., Washington, D. C., and in the University of Vermont, etc. 58 illustrations. Small 12mo. pp. 325. Philadelphia: Henry C. Lea's Son & Co., 1882.

THIS work has been prepared especially for the use of students, and is a compilation from three leading text-books in general use in our schools. We recognize in it the illustrations of Playfair and Leishman, and others of works of older date. These are generally well selected and executed, and add to the creditable appearance of the book, which may be easily carried in the pocket, and used for ready reference. It presents the teachings of Playfair, Leishman, and Lusk, in a very condensed form, saying a few words upon a great variety of obstetrical subjects, and confining the attention mainly to practical matters. In general it is fully up to the times, and teaches the most approved methods of management and medication. As a manual, without any pretension to originality, it is a successful effort at condensation, and may be useful in refreshing the memory upon obstetrical matters. Such books should never, for reasons of economy, be substituted for the more elaborate treatises which every student and practitioner should possess in addition. A *vade-mecum* is only to remind the student, not to fully teach him.

SOCIETY PROCEEDINGS.

MASSACHUSETTS MEDICAL SOCIETY.

One Hundred and First Anniversary, Boston, June 13 and 14, 1882.

(Specially reported for THE MEDICAL NEWS.)

TUESDAY, JUNE 13TH.—During the forenoon visits were made to the hospitals, and operations witnessed.

The Society assembled at noon in Horticultural Hall to listen to the reading of medical essays.

The first paper was

ON COTTAGE HOSPITALS,

by DR. L. W. BAKER, of Baldwinsville. The reader stated that in 1859 Mr. Albert Napper established at Cranleigh, England, the first village hospital; since then the system has gained in popular favor, so that now there are at least 250 of these institutions in successful operation in that country. This movement has also extended to the continent and the British colonies, and, to a limited extent, to the United States.

Some of the advantages of the cottage hospital system are that the small, detached, one-story buildings are much more favorable hygienically for the treatment of patients, than are the large many storied structures so commonly seen in city hospitals. The small size of the wards allows of better classification and treatment of disease. During the past twenty years the cottage hospitals of England have annually relieved some 50,000 patients, who contribute at least one-sixth of the cost of their maintenance to the hospital. In that country it has been found that cheap wooden buildings under the care of neighboring physicians, assisted by committees of ladies, provide admirable accommodations for the sick. In this country, these hospitals would provide for a very large class of people in the more populous manufacturing towns, where many of the employés are without a home, living in boarding houses, and who in case of acccident or sickness can be but poorly cared for.

One bed for every thousand inhabitants in the rural districts, with a somewhat larger proportion in manufacturing towns, is the standard laid down by the authorities on the subject. In Massachusetts one of these small hospitals has been in successful operation at Pittsfield for several years; another is contemplated at Newton; while a third, intended especially for children, has just been established at Baldwinsville.

As to the expense, the reader stated that in his experience, for a structure with a capacity of at least twenty-five beds for children, $5000 will nearly, if not quite, cover the cost of land and buildings.

The cottage hospital is particularly adapted for the treatment of diseases incidental to childhood, sick children requiring, more than any other class, an abundant supply of pure air, and the best hygienic surroundings. There are but few cases ordinarily admitted to the children's hospital whose condition would forbid a short journey necessary to reach a suburban cottage hospital. Children suffering from the more chronic forms of disease can be greatly benefited by a sojourn at such an institution.

In reply to questions, the reader stated that he thought in many of our manufacturing villages the operatives in mills would be willing to contribute a small sum a week for the support of a cottage hospital. The object should be to make the life in such an institution as home-like as possible, to counteract the dread which the people have of sending their friends to hospitals.

The next paper was on

DISEASE GERMS,

by DR. J. W. HANNUM, of Ludlow. The reader stated that the etiology of disease interests the profession now as never before. Until 1865 an affirmative answer could not have been given to the question, Is it possible that disease can result from the introduction of germs into the organism? Pasteur's researches at that time, regarding the organisms which destroyed silk worms, answered this question affirmatively. The writer gave an account of the researches which have been made regarding the organisms which are supposed to cause the various diseases, such as small-pox, diphtheria, phthisis, etc. Food-supply should be investigated, lest disease organisms may be communicated to the system from this source.

DR. WALTER ELA, of Cambridge, read a paper on

THE COINCIDENCE OF ANAL FISTULA AND PHTHISIS.

Many authorities were cited holding the affirmative and negative of the above question. Dr. Ela expressed his firm conviction of a coincidence between the two affections. He estimated that about twenty per cent. of patients with fistula in ano are phthisical. He drew the conclusions why the phthisical have anal fistula so often, to be due to (1) tubercular deposit in the rectal walls near the anus, and subsequent ulceration and fistula; (2) to the retention in Morgagni's pockets of tuberculous diarrhœal discharges, subsequent inflammation, burrowing, and fistula; and (3) to the inflammatory process being set up in some of the numerous submucous rectal glands, which are prone in tuberculous patients to become inflamed and abscess follow.

DR. CHARLES F. FOLSOM, of Boston, next presented a paper on

SOME OBSCURE MENTAL SYMPTOMS OF DISEASE.

He related at length several cases of disease seriously interfering with some of the functions of the mind without causing marked intellectual disorder. The cases came under the head of moral insanity, not very properly so called, because the loss of control over the operations of the mind constitutes evidence of impaired intellect, and is a purely mental symptom, which under some form or other is always discoverable. Like other diseases, it is progressive, and as a rule ends in suicide or advances slowly into mania or dementia. The symptoms of the disease were detailed by the reader. These symptoms, especially if without external cause, following child-birth, fevers, brain disease, physiological changes, or any illness depressing the system, indicate a condition which needs treatment; and in the opinion of the reader, an ealier detection of insanity will result in wiser treatment and in a greatly increased proportion of cures.

TUESDAY AFTERNOON, JUNE 13TH.

At an Adjourned Meeting of the Society, held for the transaction of business, the question of

THE ADMISSION OF WOMEN

was the subject of animated discussion. A motion was made to so alter one of the by-laws as to make females, as well as males, eligible as candidates for admission to the Society. THE PRESIDENT ruled, and his ruling was sustained, that the Society might discuss the question, but could not act on any amendment to the by-laws until the said amendment had been first passed by the Councillors. The Society finally passed a vote instructing the Secretary to inform the Councillors that, in the opinion of the members present, it is expedient that well-qualified women be admitted to fellowship on the same terms as men.

At the Councillors' Meeting, held Tuesday evening, June 13—a body composed of one in eight of the Fellows elected annually by the District Societies—the question involved in the above vote of the Society was indefinitely postponed.

WEDNESDAY, JUNE 14TH.

The Society reassembled at 9 o'clock A. M., THE PRESIDENT, DR. H. W. WILLIAMS, of Boston, in the chair.

After the reading of the records of the last annual meeting, and the announcement of the names of 102 new and of 33 deceased Fellows, a vote was passed calling the attention of the Massachusetts Senators and Representatives in Congress to the importance of passing a joint resolution authorizing the President to initiate an international commission in reference to color-blindness and visual acuteness in navies and merchant marine.

The reading of medical papers was then resumed. A communication entitled

AMERICAN DYSPEPSIA

was presented by DR. J. H. ROBBINS, of Hingham. The reader inclined to the opinion that the same delicacy of stomach prevails in Great Britian and on the European Continent as in this country, but he announced that in considering dyspepsia among our own people, he wished to emphasize the fact that, more than of anything else, it is the result of neurosal causes. American dyspepsia seems to be without a morbid anatomy. Some of the principal causes assigned for it are rapidity in eating; unsuitable or improperly prepared food; over-eating, a very common bugbear; the use of ice water; and the universal use of fine flour. One great principle in nature is apt to be overlooked by theorists, viz., the very remarkable power of the human system of adapting itself to all sorts of dietetic conditions and even enormities, and appearing to thrive upon them. Causes of a neurosal nature have a much more extended and detrimental effect on digestion than those previously mentioned. The evil effect on the digestive processes of bad news, fear, worry, mental strain, is well known to every physician, while the pleasurable emotions, a contented mind, success, etc., contribute to eupepsia. These neurosal causes operate with especial power upon the present generation of the Anglo-Saxon race. Our parents and grandparents expended to a great degree their own vital powers amid the rapidly changing scenes of a new country, and have transmitted to their children delicate and neurotic constitutions.

Among the causes which are acting upon large classes of our population are, 1st. The manner of rearing our children, who, weakly at the start, are forced into precocity by various means; 2d. School teaching; 3d. Lack of simplicity and honesty in living; 4th. Business strain, worry, and apprehension; 5th. The present unsettling of religious beliefs; 6th. The state of the weather; 7th. Valetudinarianism.

We may be powerless to stay or modify the influences of the present phase of our civilization upon the nerves and stomachs of the Anglo-Saxon race in this country, but by being aware of these influences we may find means outside the materia medica to benefit many a patient to whom drugs alone can bring but little help.

A STUDY OF THE ACTION OF IRON

was the subject of a paper by C. H. WILLIAMS, M.D., of Boston. By experimentation, the writer found that a freshly-made, clear solution of the tartrate of iron, neutralized with caustic soda, would cause death in a rabbit when from 10 to 20 milligrammes of iron per kilogramme of the animal's weight were injected into its veins. The fatal dose for a rabbit of average size was about one-third of a grain of iron. Death followed in from six to twelve hours. Experiments were also made on dogs and cats. The results of post-mortem examinations of the animals experimented on were given, and the conclusion reached that we have in iron probably not a dangerous element, but at least a drug of more toxic qualities than is generally imagined. Not only when iron is introduced into the veins of animals, but also when given by the stomach in large doses death has followed. It has been observed in healthy men that very large doses of iron caused weakness, a disposition to sleep, colicky pains in the region of the stomach, and vomiting. The blood was also darker than normal. Iron has, without doubt, poisonous qualities; the symptoms which it causes come chiefly from the alimentary canal, and in fatal doses it diminishes the amount of carbonic gas in the blood. Its action in the economies probably resembles that of arsenic and platinum, and we are justified in believing that the action of iron on man in excessive doses would be similar to that observed in animals.

Regarding the tonic effects of iron two theories have been advanced to explain them; the first, that its good effects are produced by its action on the red blood-corpuscle; the second, that it exerts a special influence on the digestive system. Regarding the first, we know that iron is a constituent of the red blood-corpuscle, that in anæmia the number of these corpuscles is less than normal, and after using iron they are increased, so that it is necessary on the first theory to supply iron in order to have plenty of red blood-corpuscles; but only one-thirtieth part of the red blood-corpuscle is iron, and there are only three grammes, or forty to fifty grains, of iron in the blood, and only a portion of this is likely to be wanting at any time; there is a small quantity of iron in almost all the food we eat, so that any deficit of iron can never be very great. It is well known that it is not by a few doses of iron that its good effects are produced, but only after continued use. For the second theory, the evidence afforded by experiments on animals, as well as the symptoms aroused in man when large doses are given, leaves but little doubt that iron has especial action on the digestive organs, particularly on the stomach and upper part of the small intestine where absorption takes place.

Iron should be given on a full stomach. There is little excuse for the extraordinary number of preparations of this drug. A few are all that are needed.

The results of experiments and clinical observation show that iron is no exception to the general rule which holds good for all the other heavy metals, such as copper, platinum, arsenic, etc. In excessive doses it may produce deleterious results. The good following its use would seem to be due to its action in promoting digestion and assimilation, rather than to the increase in the number of blood-corpuscles, which is probably a result of the improved nutrition.

The concluding paper of the session was on

THE RELATION OF MOULD-FUNGI TO DISEASE,

by DR. W. W. GANNETT, of Boston. The reader stated that botany has always held an important place among the many sciences intimately connected with medicine, as furnishing a larger portion of the materia medica. In recent times the alliance has become still closer, not so much because botany has furnished new means of curing disease, but because of the discovery that many important factors in the causation of disease are to be derived from the vegetable kingdom. Reference is made to the growth upon or within the body of certain of the lowest forms of vegetable life, to the detriment of the individual. Chlorophyll plants make fuel; plants without chlorophyll and animals burn fuel. The fungi are among the plants without chlorophyll. Of the fungi two subdivisions are of interest in medicine: a lower one, the bacteria; and a higher variety, the mould-fungi. The reader then considered the question whether at all, and if so in what cases, the mould-fungi stand to disease in the relation of cause and effect.

After a full discussion of this question, and an account of the observations and experiments of authorities, the paper concluded with the statement that as yet the experimental study of the moulds is in its infancy, but it is to be hoped that before many years more light may be thrown upon their relation to disease. In regard to the relation of mould in general to disease, so far as our present knowledge goes, there is but one disease in man, namely, actinomycosis, which fulfils the scientific conditions necessary in order to state that the fungus and disease are cause and effect. In regard to the mould diseases of the skin, we may *practically* say that the fungus is the cause; scientifically it cannot be proved. Too little is known of thrush, otomycosis, and madura foot to allow of any opinion being expressed. Of other moulds found within the body, not only is there no ground for considering them pathogenic, but proof is wanting that they are anything more than harmless saprophytes.

At noon the

ANNUAL DISCOURSE

was delivered by JAMES P. LYNDE, M. D., of Athol.

At the beginning of his discourse on *Infantile Mortality; its Causes and Prevention*, the writer quoted from the 39th Registration Report of Massachusetts, showing that there were born alive during the year 1880, 44,217 children; 7190 died during the first year of life, 2281 during the second, 1250 during the third, 857 during the fourth, 635 during the fifth, showing 12,213 children who died under five years of age; 1463 died between five and ten, and 611 between ten and fifteen. Cholera infantum had 2118 victims.

Among the causes of this startling mortality during infancy are prenatal hereditary influences, and hereditary tendencies to certain forms of disease. This class of causes is beyond the control of the physician.

A second cause is the prevalence of acute infectious diseases. The deaths from this cause under five in 1880 were 1909.

A third cause is the severe, acute inflammations, such as pneumonia, meningitis, etc. Ignorance and carelessness have much to do with this class, which caused in 1880 in children under five 2269 deaths.

A fourth cause is dentition. It is rarely dangerous unless associated with other disturbing influences.

A fifth cause is the unhealthy hygienic influences to which many children are subjected.

A sixth cause is the influence of intense solar heat. July, August, and September are peculiarly fatal months to infants. To prevent and overcome the effects of solar heat, it is necessary to keep the child quiet at home in a large cool room; have it lightly clothed and given frequent cool baths, fresh air, and pure water.

The seventh and most important cause of infantile mortality is the use of improper food. Milk has been divinely ordered as the only proper food for the young of all classes of mammalia; and nature has made provision for a bountiful supply. The prevailing custom with physicians and nurses, if circumstances prevent the nursing of the infant, is to use cow's milk diluted with one, two, or three parts of water, and with various other additions, but the orator held that with care in the selection, management, and feeding of the cow, we can modify the milk product and secure a food infinitely nearer human milk than any artificial mixture can be. And he stated that for thirteen years, when for any cause it had been necessary to resort to any other food than the mother's milk, he had used undiluted cow's milk, and failed only in three instances to raise the child.

In artificial feeding we should carefully observe the methods and follow the indications of nature. We should satisfy the infant's thirst by allowing it to draw water from a tumbler through the nurse tube. Then in a few minutes let it have all the fresh undiluted cow's milk it will take, warmed to blood heat, being sure that it is slowly ingested, just as nature supplies it when nursed from the mother's breast.

The cow should be selected with great care. We should see that it is properly fed and stalled. With all care the milk may not be acceptable to the infant's stomach; we may make it more alkaline by adding a suitable quantity of the bicarbonate of soda or potassa, or of the phosphate of soda, or by the milk of another cow. The trouble may be due to bacteria or microgerms; then sterilize the milk, as advised by Tyndall, by subjecting it to a heat of 150° for a few minutes, but do not boil it. Salt should not be forgotten.

The resources of preventive medicine in lessening infantile mortality were referred to, and the hope was expressed that in the near future there might be established some beneficent charity that will relieve poor children in their homes, by furnishing an abundant supply of pure milk, ice, and other comforts, or provide for them good care in a well-regulated asylum.

A vote of thanks was presented to the orator for his interesting and scientific Address.

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President.—Alfred Hosmer, M.D., of Watertown.
Vice-President.—J. H. Mackie, M.D., of New Bedford.
Treasurer.—Frank W. Draper, M.D., of Boston.
Corresponding Secretary.—C. W. Swan, M.D., of Boston.
Recording Secretary.—F. W. Goss, M.D., of Roxbury.
Librarian.—David H. Hayden, M.D., of Boston.
Orator for Anniversary in 1883.—Amos H. Johnson, M.D., of Salem.
Anniversary Chairman.—Francis H. Brown, M.D., of Boston.

THE PRESIDENT introduced to the Society the PRESIDENT-ELECT, DR. ALFRED HOSMER, of Watertown.

The Society then adjourned to the Music Hall, where more than seven hundred Fellows dined and listened to after-dinner speeches.

The next Annual Meeting will be held in Boston, on the second Wednesday in June, 1883.

RHODE ISLAND MEDICAL SOCIETY.

Seventy-first Annual Meeting, held at Providence, June 15, 1882.

(Specially reported for THE MEDICAL NEWS.)

The Society convened for its seventy-first annual meeting in Lyceum Hall, Providence, Thursday, June 15, 1882.

THE PRESIDENT, DR. CHARLES O'LEARY, occupied the chair. About eighty Fellows were in attendance.

The records of the last annual, and also of the last quarterly, meeting were read by the SECRETARY, DR. GEORGE D. HERSEY, and approved.

THE SECRETARY'S ANNUAL REPORT

was then read by Dr. Hersey, stating that four well-attended meetings had been held by the Society during the year; that two Fellows had died and three had removed from the State; and that there are now one hundred and seventy-nine active and seventeen honorary members of the Society.

THE TREASURER'S REPORT

was presented by DR. CHARLES H. LEONARD. It showed that there is cash on hand to the amount of $322.71, and that the amount deposited in savings banks for the printing fund is $840.56.

The report was approved, and on motion of DR. HERSEY, it was voted that the sum of $200 from the surplus in the treasury be transferred to the printing fund.

The Secretary next read the report of the

TRUSTEES OF THE FISKE FUND,

an annual report being provided for by the will of the donor. The Trustees organized with Dr. Charles O'Leary as Chairman, and Dr. C. W. Parsons as Secretary of the Board. It appeared that no prize had been awarded on either of the subjects proposed for 1882, and that the same subjects are continued for 1883, and a third one is added. The three are as follows:

1. Neuralgia, its cause, pathology, and treatment, with special reference to nerve-stretching and nerve section as a method of cure.

2. Is the general disuse of blood-letting in accordance with sound physiological principles as applied to the treatment of disease.

3. Hip-joint disease: its most successful treatment as determined by experience.

For the best essay on either of these themes, worthy of a premium, the Trustees offer the sum of $200, under the usual conditions.

The Trustees voted to present their remunerative fees to the printing fund, to be used in printing the prize essays or to increase the fund. It was voted that no action be taken on the report.

DR. H. G. MILLER, of the

PUBLICATION COMMITTEE,

reported that Part V. of volume second of the Transactions of the Society had been printed. The edition numbered three hundred and fifty copies of one hundred pages each—containing all the papers, entire or in abstract, presented during the year.

DR. T. NEWELL, Chairman of the

LIBRARY COMMITTEE,

reported that 501 volumes, from various sources, had been added to the library during the year, making a total of 2094 volumes.

Mrs. Elizabeth A. Sheppard has given $500 towards a building fund, and several other contributions and pledges for the same object have been received.

The library is open to members daily, from 12 to 1 P. M., at 56 N. Main Street.

The report of the

BOARD OF CENSORS

was next read by Dr. S. S. Keene, Secretary of the Board.

Drs. Albert M. Knapp, Henry K. Gardiner, Neil O'Donnell Parke, and George Galen Wheeler were recommended for fellowship and duly elected.

The names of several candidates were given, whose election must lie over until the next meeting.

It was voted to accept the report and that it lie on the table for the present.

DR. KEENE then moved an

AMENDMENT TO THE BY-LAWS,

Section IV., Chapter 3d, which, after considerable discussion and two or three slight changes, was adopted by the Society. As thus amended it stands as follows:

Section IV. Every candidate for fellowship in the Rhode Island Medical Society shall hereafter be required to pass a strict personal examination, before the Board of Censors, in those branches of medical science taught in recognized medical colleges; to give satisfactory evidence that he has adequate knowledge of the Latin language and has received a good general English education; and that he does not profess, or intend to practice, any exclusive system of medicine. If such examination be satisfactory to a majority of the censors present, the Board of Censors, in compliance with the by-laws, shall recommend the candidate for fellowship.

In Dr. Keene's amendment, as originally worded, the third clause was as follows: "That he does not profess or intend to practice Homœopathy, Thomsonianism, Eclecticism, or any distinctive system or school of medicine."

It was this clause that led to discussion and evoked several opinions and suggestions until it was finally modified and adopted as given above.

THE ELECTION OF OFFICERS

was next in order, and resulted as follows:

President.—Job Kenyon, M.D. *Vice-Presidents.*—Oliver C. Wiggin, M.D.; Horace G. Miller, M.D. *Secretary.*—George D. Hersey, M.D. *Corresponding Secretary.*—Edward M. Harris, M.D. *Treasurer.*—Charles H. Leonard, M.D.

Board of Censors.—Drs. Benjamin Greene, of Portsmouth, R. I. (vice Dr. King, of Newport, deceased), Ariel Ballon, Otis Bullock, J. H. Eldredge, J. W. C. Ely, George P. Baker, Lloyd Morton, and Stephen S. Keene.

Publication Committee.—Drs. H. G. Miller, George W. Porter, and Robert F. Noyes.

Library Committee.—Drs. T. Newell, H. G. Miller, George D. Hersey, O. C. Wiggin, and George W. Porter.

DR. A. G. BROWNING read a brief report of his visit as delegate to the annual meeting of the Connecticut Medical Society.

The reception of

DELEGATES FROM OTHER SOCIETIES

was announced.

The State Medical Society of Massachusetts was represented by Dr. Joseph Steadman, that of Vermont by Dr. Marcus Ide, and that of Connecticut by Dr. William Denning. These gentlemen were introduced, and cordially greeted by President O'Leary, and each spoke briefly in response.

A letter from Dr. Horatio R. Storer, of Boston, was read, regretting his inability to be present as an invited guest.

PUBLIC BATHS.

DR. O. C. WIGGIN introduced the following resolution, which was not sustained by vote of the Society:

"*Resolved*, That in view of the fact that the City of Providence affords no proper facilities for public bathing, the Rhode Island Medical Society hereby requests the City Council, as an important sanitary measure, to provide suitable places where the public can bathe at all times of the year."

The chief point in opposition to the resolution was that the subject should more properly be taken up by the Providence Medical Association, as it pertains to the City of Providence, and not to the State at large.

DONATIONS TO THE LIBRARY.

DR. D. HOMER BATCHELDER presented to the library committee seven valuable and interesting volumes of medical literature, bearing various titles, and published in the eighteenth century. One volume was of special interest, from the fact of its containing the autograph of the famous Dr. William Cullen formerly of Scotland. The title of this book is given, "An Essay on Fevers, to which is now added a Dissertation on the Malignant Ulcerous Sore-throat," by John Huxham, M.D., in 1757. Another of the volumes was the *first book ever purchased* by Dr. Nathan Smith, the founder of the Dartmouth Medical School.

DR. CHARLES W. PARSONS, of Providence, then delivered

THE ANNUAL ADDRESS,

which was largely biographical and historical in its character. About seventy years ago an effort was made to enlarge the facilities for medical education. In September, 1811, the first three professors were appointed in the Medical School connected with Brown University, and in 1812 the Rhode Island Medical Society was granted a charter, in which appeared the names of forty-nine physicians, of whom fourteen belonged to Providence and seven in Newport. The first meeting of the Society was held in Providence, April 22, 1812. During that year fifteen new Fellows were admitted. The annual meetings were held alternately in Providence and Newport up to 1861. Since that year they have been held in Providence, except occasionally at Newport.

Dr. Parsons then gave a brief sketch of the lives of the first four Presidents of the Society, Drs. Amos Throop, William Bowen, his brother Pardon Bowen, and Caleb Fiske, who afterwards founded the "Fiske Fund" so called.

The proper objects or functions of the Society were then described:

1. To discriminate between fit and unfit practitioners of medicine. In this connection two questions had arisen which had caused much discussion. The first was concerning those members who announced themselves as homœopaths as that branch of practice grew into existence. Such were exempted by the Society and gradually dropped from its roll of membership without expulsion. It was not the method of medication that was objected to, but the assumption of the *name* of an *exclusive dogma* of medicine.

The second question arose from the application of a woman-physician for membership, which occurred in 1870. The applicant was a graduate of the Philadelphia School of Medicine, which was not then recognized by the American Medical Association. Hence, the Censors of the Society, according to the by-laws, could not recommend her admission. The Society, by a vote of twenty-four in favor to fifteen opposed, expressed its wish to suspend the by-laws. A two-thirds vote being necessary, the matter was not brought up again until two years later, when the requisite number voted in favor of the change. Since that date two more women have been admitted. The recent action of the Massachusetts Medical Society, in its renewed refusal to admit women to membership, was alluded to in terms of surprise and regret.

2. Another important object of the Society had been the promotion of good feeling and fellowship, and to this end the annual dinner had contributed much. In 1835, from motives of economy, it was voted to do away with the collation for the future; but, in 1836, the custom was re-established, and has since been maintained.

3. A third function of the Society was to promote mutual improvement, as evinced by the papers, essays, and discussions which have constituted its order of exercises.

The speaker quoted from some of the annual addresses, to show the excellent ability of some of the presiding officers, and also claimed that the quality of the after-dinner speeches had greatly improved since the provision made in 1870 for the yearly appointment of an anniversary chairman.

In 1846, a semi-annual meeting was instituted, and since 1870 quarterly meetings have been held.

The speaker then described the early history of the Society's library. In 1868, it was voted to present the books and specimens owned by the Society to the Rhode Island Hospital, and the idea of establishing an extensive library was not suggested till 1876. To Dr. Chase Wiggin, of Providence, belongs the honor of making the first definite proposal in this direction, when he offered to give $1000, and pledge the annual payment of $25 for ten years, provided the Society would raise a certain amount. These conditions were accepted, and since December, 1878, the library has grown steadily up to the present time.

4. The fourth function of the Society had been to influence legislation; and the results of its efforts in this direction were manifest in the admirable and complete system of registration of births, marriages, and deaths which is observed in Rhode Island, and in connection with which the names of Dr. Joseph Moran and Dr. Edwin M. Snow are prominent. The examination and registration of druggists, and the existence of a State Board of Pharmacy, are due largely to the influence of this Society. Its efforts to enforce the registration of physicians had as yet been unsuccessful, but in the appointment of medical men as coroners, and in securing legislation bearing on the matter of expert testimony, its influence had been efficient.

Feeling and eloquent tributes were paid by the speaker to the memory of many of the presiding officers now deceased, and also of the late Dr. David King, of Newport.

Upon motion of DR. E. T. CASWELL, the Society voted to thank Dr. Parsons for his able address, and also request a copy of the same for publication.

Dr. O'Leary then called his successor, Dr. Kenyon, to the Chair, the latter briefly expressing his thanks for the honor conferred.

The Society then adjourned to meet in the same place next September.

THE ANNUAL DINNER

was provided by Ardoene, at the Café St. George.

ONTARIO MEDICAL ASSOCIATION.

(Specially reported for THE MEDICAL NEWS.)

THE second annual meeting of this Association was held in Toronto, June 7 and 8, in the Hall of the Ontario Medical Council, under the presidency of DR. COVERNTON, of Toronto. About one hundred members from various parts of the Province were present, and as visitors, Dr. Avery, of the Michigan State Board of Health, and Drs. Fenwick, Osler, and Shepherd, of Montreal.

The meeting was opened by

THE PRESIDENT'S ADDRESS,

which dealt largely with public health matters. The following is an abstract.

After dwelling upon the responsibility resting upon doctors and physicians in the exercise of their profession, and cautioning them against being too rash in putting into practice the sparkling novelties in theories that were brought forward, he gave a sketch of the work already done by the Provincial Board of Health. He dwelt upon the importance of government enquiry into the health of cities, towns, and country, and their regulation of matters concerning the health of the people. He pointed out that equal necessity existed for the isolation of patients suffering from the contagious and often fatal diseases of scarlet fever and diphtheria as of those suffering from small-pox, the more especially as there was no such protection as vaccination against the former diseases. No efforts to protect the community against the ravages of infectious diseases would be entirely successful until some public action was taken to instruct the people concerning the initial symptoms as well as the contagiousness of those forms of sickness,

and concerning the measures which should at once be adopted for the protection of their own and other children. It was also necessary that the sanitary authorities, in performing their duties for the isolation of the sick, and the disinfection of affected houses, should act in a considerate spirit, or the public would withhold their support. He proceeded to impress upon members of the profession the importance of co-operating with the Provincial Board of Health in collecting vital statistics, of reporting to the public health officer every case of infectious disease coming under their notice, and of urging upon their several municipalities the establishment of local boards of health and the appointment of local health officers. These local health officers by occasional lectures on the fundamental principles of hygiene could do much for the benefit of their respective communities. The President then referred to the discoveries made which clearly traced the origin of many of these diseases to the presence in the blood of vegetable germs called *bacteria*, whose deadly influence could be lessened by certain preventive methods of treatment, or by inoculation for a mild type of disease. He stated that water was the most usual vehicle for conveying these germs into the human system, and pointed out how careful people should be in the selection of their drinking water. The Ontario Central Board of Health has prepared a pamphlet entitled, "How to check the spread of contagious or infectious diseases," to which most extensive circulation will be given. The President concluded an exhaustive address by warning those present of the great responsibility which rested upon them in regard to the preservation of public health, and he abjured them not to shrink from the duty which an honorable profession entailed upon them.

Papers were then read on the following subjects. They were read in general session, and owing to their number very little time was allowed for discussion.

Treatment of Diphtheria, by DR. WORTHINGTON, of Clinton. After a large experience he had found the affection best treated by cold applications to the throat, stimulants, and the inhalation of aluminized spray. He reduces the general temperature when above 103° Fahr. by cold to the surface of the body.

Antiseptic Treatment of Phthisis, by DR. PHILIP, of Brantford. After referring to the contagiousness of the disease and its probable parasitic origin, he exhibited one of Dr. MacKenzie's (Edinburgh) nasoral respirators. A case was fully detailed in which the use of the inhaler (saturated with creasote and carbolic acid) for eight or ten hours a day, for two months, gave a most satisfactory result.

Locomotor Ataxia.—DR. STEWART, of Brucefield, read the notes and exhibited the patient, who had been the subject of the affection for twelve years, and was greatly troubled by the intensity of the lightning pains. Eight months ago the right sciatic nerve was stretched with decided benefit so far as certain symptoms were concerned, but without influencing the ataxia. The pains were much relieved, and instead of attacks every day or so, he now had them only every three or four weeks, and they were not so severe. The patellar reflex became apparent after it, the delayed sensation was improved, and the impaired muscular sense benefited. The second day after the operation severe hemorrhage took place from the wound. The most remarkable feature in the case was the *shrinking of the legs after very severe attacks of the pains.* Repeated measurement showed that a diminution of an inch in the circumference gradually took place, and it was some days before they resumed their normal size. He had not seen this symptom referred to by any writer. In only one out of four cases of stretching had he seen any permanent benefit to the ataxia.

Emmet's Operation for Lacerated Cervix.—Two papers on this subject were read, one by DR. TEMPLE, of Toronto, the other by DR. HOLMES, of Chatham, both strongly favoring the operation. The former presented seven cases, the latter nine. Both authors appeared to agree with Dr. Thomas as to the frequency of this accident, and spoke of its occurring in between thirty and forty per cent. of all cases of labor.

Considerable discussion took place. DR. GARDNER, of London, Ont., asked if it is so frequent should we not examine every woman some days after delivery? How is the accident caused, and what means can we take to prevent it?

DR. MULLIN, of Hamilton, said that he did not think anything like a proportion of forty per cent. of lacerations occurred. It was a matter which many who were present could settle for themselves, between this and the next meeting. He had very seldom observed it in an extensive practice, and if it happened as often as stated, many of his patients must have been subjects of it, but without interfering with their fecundity. He would like to know from Dr. Thomas, or from the readers of the papers, what was the proportion of cases among their own patients. No doubt many of the cases which fell into the hands of these gentlemen came from other practitioners.

DR. POWELL, of Edgar, asked whether digital dilatation had not some influence in causing this laceration.

DR. MCFARLANE, of Toronto, questioned if it occurred in thirty-three per cent. of cases, and was interested to know how these figures were obtained. Meddlesome midwifery was, he thought, responsible for the accident in many instances. He usually could tell by examination when an os was going to split, just as one could tell a perineum which was sure to go. He gave an instance in which the cervix, the wall of the vagina, and the perineum were lacerated accidentally by the forceps, and in which a good recovery was made. The relation of the laceration to subinvolution of the uterus was overestimated. He believed this condition was more frequently caused by getting up too soon.

DR. ROSEBRUGH, of Hamilton, thought that one reason why the older men had not seen this affection so often was that they used the wrong sort of speculum. It was almost impossible to see it with the Fergusson or even the bi- or tri-valve instrument. The patient should be placed in Sims' position, and examined with the duck-bill speculum; the os may be pulled down, and in this way alone the entire extent of the laceration can be seen.

DR. A. A. MACDONALD, of Toronto, called attention to the fact that the cervix and perineum were usually lacerated together.

DR. CANNIFF, of Toronto, had seen extensive laceration which did not appear to have any injurious effect upon the patient, who continued to bear children and enjoyed good health. He was amazed at the percentage given, and urged the collection of definite statistics.

DR. HAMILTON, of Port Hope, believed that they must distinguish between slight and extensive rents, just as in the perineum. In the latter, if we reckoned every slight tear, there would probably be over 75 per cent. He did not think that serious laceration of the cervix, requiring treatment, occurred oftener than about once in one hundred cases.

THE PRESIDENT (Dr. Covernton) agreed with previous speakers in thinking that the number of cases in which it was met with was placed too high. In a long and varied practice he had not seen many cases.

DR. HOLMES, in reply to a question by Dr. Zimmerman, of Toronto, stated that three of his nine cases were delivered instrumentally. He thought the accident occurred most frequently in labors with violent pains and rigid cervices.

DR. TEMPLE had not noted the number of instances in his own practice. He believed that it was often caused by hastening the first stage, and by giving ergot before the os was properly dilated. He thought the suggestion of examining patients, nine or ten days after delivery, a good one, but not always practicable. The benefit of the operation in suitable cases was undoubted.

Bleeding after Tonsillotomy.—DR. POWELL, of Edgar, narrated his personal experience of this accident, and first read Dr. Lefferts' description of his case, and afterwards described his own sensations. He lost five or six pints of blood before the bleeding was finally controlled by pressure.

Dislocation of Ulna and Radius Backwards.—DR. DUPUIS, of Kingston, narrated a case, that of a man aged twenty-five, in whom it occurred five weeks before coming under observation. Reduction was accomplished with some difficulty, but the man recovered completely. He called attention to the importance of this accident to country practitioners, as suits for malpractice were probably more frequent after it than any other. The responsibility of such cases should always be shared with another doctor. He then described the reasons why it was so difficult to reduce, and the changes which went on if the normal position was not restored.

Local Health Boards.—DR. YEOMANS, of Mount Forrest, read a paper on the constitution and functions of these organizations, their importance and their relation to the central board.

DR. AVERY of the Michigan State Board of Health, addressed the meeting, and briefly reviewed the history of the Public Health Board in Michigan. He called attention to the good which had followed the organization of public meetings in different parts of the State. In this way the interest of the people was awakened, and much important knowledge diffused. He urged the systematic inspection of emigrants at Port Huron, and asked the co-operation of the Canadian authorities in carrying out the operations of the National Board of Health in this matter.

DR. FENWICK, of Montreal, President of the Canada Medical Association, then addressed the meeting, and congratulated Ontario on the establishment of a Central Health Bureau. He hoped that a similar one would soon be in operation in Quebec. As President of the Dominion Association, he was glad to see the formation of Provincial Societies, and he could not regard them as in any way antagonistic, but rather as aids to the general one.

Adenoma of the Vault of the Pharynx.—DR. RYERSON, of Toronto, called attention to the frequency of this affection, the importance of its recognition, and the necessity of early and thorough removal of the growths. He illustrated his remarks by several drawings, and by the case of a child which showed the heavy, listless expression so common in individuals so affected. He removed the growths either with scissors or by the galvano-cautery.

Treatment of Diphtheria by Biborate of Soda and Sulphur.—DR. GHENT, of Priceville, gave his experience of these remedies, mixed in equal parts, and applied to the throat by means of a tube. He claims that it gives great relief, and causes the disappearance of the patches in from twelve to fourteen hours. There was also less swelling. He had treated one hundred cases in this way without a death.

Liquor Calcis in Diphtheria.—DR. MCKELCAN, of Hamilton, gave his experience of the use of this remedy in the form of spray to the throat. He had been led to use it on finding that a bit of membrane dissolved in it more rapidly than any other reagent which he had tried. He sometimes combined it with the permanganate of potash.

DR. MCDONALD, of Hamilton, spoke of the use of hot fomentations, and of the difficulty experienced in many cases of applying local remedies.

DR. OSLER, of Montreal, regarded diphtheria as a self-limited disease, in which, in the large proportion of cases, varying in different epidemics, the tendency was to recovery, no matter what mode of treatment was adopted. There were certain cases, apparently doomed from the first, in which no treatment seemed to avail.

DR. HOLMES, of Chatham, thought that, as regards treatment, we should distinguish cases which involve the larynx, and those which do not, and cases with or without constitutional symptoms. He relied chiefly on iron, potassium chlorate, and quinia.

DR. CHEMESHA, of Port Hope, referred to a case with severe laryngeal symptoms, in which the inhalation of spray, saturated with bicarbonate of soda, appeared to give great relief.

Law of Coroners.—DR. RIDDELL, Coroner for Toronto, read an exhaustive paper on the duties of coroners, and reported many interesting medico-legal cases in illustration of points in the law.

The following were also read: on *Concussion of the Brain*, by DR. CURRY, of Rockwood; on *Alcohol in Disease*, by DR. SMITH, of Sparta; on the *Therapeutics of Insanity*, by DR. DANIEL CLARK, of Toronto; on *Points in the Measurement of the Lower Extremities*, by DR. OLDWRIGHT, of Toronto.

The following reports of Committees were read: On Medicine and Therapeutics, by DR. FULTON; On Diseases of the Eye and Ear, by DR. ROSEBRUGH, of Toronto; On Necrology, by DR. RIDDELL, of Toronto.

The following were elected

OFFICERS FOR THE ENSUING YEAR:

President, Dr. Macdonald, of Hamilton.

Vice-Presidents, Drs. Stewart, of Brucefield; Daniel Clark, of Toronto; Dupuis, of Kingston; Harrison, of Selkirk.

General Secretary, Dr. White, of Toronto.

General Treasurer, Dr. J. E. Graham.

Corresponding Secretaries, Drs. William Graham, of Brussels; Burt, of Paris; Cobourn, of Oshawa; and McIntosh, of Vankleek Hill.

The next meeting will be held in Toronto, on the first Wednesday in June, 1883.

THE AMERICAN MEDICAL ASSOCIATION.

SECTION ON STATE MEDICINE.

TUESDAY, JUNE 6.—The Section met at 3 o'clock, Dr. A. L. Gihon, U. S. N., in the chair.

Vaccine Virus.—The chair presented a communication from the Wayne County, Indiana, Medical Society, embodying a resolution passed at their meeting, having in view the passage of a law declaring it a crime for any establishment to distribute bovine virus for vaccination unless such establishment have the endorsement of the National Board of Health.

A discussion ensued on the subject of vaccine virus, during which Dr. Hibbard, of Indiana, cited a number of cases of poisoning resulting from inoculation from impure and diseased virus. Remarks were made by Dr. Ames, of Massachusetts, who spoke in favor of the formation of a national association of virus producers, properly regulated and under constant supervision of its members. The subject was further alluded to by Dr. Stevens, of Indiana, Dr. Pratt, of Indiana, Dr. English, of New Jersey, Dr. Williams, of Pittsburg, Dr. Grissom, of North Carolina. Dr. Johnson, of the National Board of Health, spoke at some length of the evils arising from impure virus and the difficulties met with in procuring bovine virus that had not been con-

taminated. He stated that in Illinois last year the industry had been carried to a great extent, virus having been sold to the extent of 1,000,000 points, at the rate of ten cents per point, or a total money value of $200,000.

Dr. John G. Lee, of Philadelphia, read a paper on *Suicide in Philadelphia during the Past Decade.*

From the 31st day of December, 1871, until the 1st day of January, 1881, out of 12,936 cases of death requiring a coroner's investigation, 636 individuals were ascertained to have ended their existence by their own hands, or a ratio of about fifty-three suicides to every 1,000 inquests. Of these, eight only were people of color, while with the exception of one case, where the color was not entered on the docket, the remaining 627 were whites. Six of the eight colored suicides were males, two were females. Of the males four were married, one was single, and in one the condition of life was unknown. Of the females, one was married, the other single.

And we are not surprised to observe that, appearing about the age of puberty, and steadily increasing, it attains its maximum when the illusions of youth having been dispelled by the stern realities of life, the struggle for existence is keenest; afterwards gradually to decline in numbers, as the bodily vitality is exhausted, and the interest which individuals manifest in worldly events becomes more and more of a retrospective character.

In opposition to the experience of European observers, who state that self-destruction occurs more frequently among the unmarried of both sexes, I find the contrary to be the case, due probably to the fact that in Philadelphia, as exhibited by statistics, the most popular time for marriage for both sexes is between the ages of twenty to twenty-five years, while suicides are not of frequent occurrence until a more advanced period of life has been reached. Out of our 636 cases of suicide, 444 were married, 138 were single, and in 54 persons the condition in life remained unknown. Of the 444 married individuals, 370 were men and 74 were women; 109 of the unmarried people were males, and 29 were females. Of the 54 whose condition in life was not recorded, 47 were of the male and 7 of the female sex. His observations gave him every reason to think that a low barometric pressure, accompanied by a high thermometric registry, with sudden fluctuations from a low to a high temperature, together with moisture and prevailing southwest winds, may to some extent at least, account for the frequency of self-murder in the spring and summer months.

Each nationality exhibited a certain partiality for some peculiar form of suicide. Native-born American males usually hang or shoot themselves, while the women show a preference for narcotic poison. Germans select either death by shooting, poison, or throwing themselves in front of railroad trains. Those of English nationality either cut their throats or shoot themselves, and in the rare instances of suicide occurring among our Irish population, drowning and hanging are usually the modes selected. The greater number of suicides are committed within-doors. Only five instances of self-destruction occurred in the county prison, and but six in the eastern penitentiary.

WEDNESDAY, JUNE 7.—DR. C. H. BOARDMAN, of St. Paul, introduced a discussion on *Expert Testimony*, the outcome of which was the adoption of the following resolution.

Resolved, That the Section on State Medicine deems it advisable and more conducive to the ends of justice that medical men called as expert witnesses should be subpœnaed directly by the court instead of as now, to be called by either side.

THURSDAY, JUNE 8.—The Section considered the resolutions presented in general session by the Women's Christian Temperance Union, and refered to the Section. After full discussion the Section voted to reaffirm the resolutions on the subject adopted by the Association at Buffalo, in 1878.

DR. C. H. HUGHES, of St. Louis, then read a paper on *The Rights of the Insane.* The fact that massive structures are erected for their care is at once a mark of philanthropy, and a recognition of their claims for care. They are entitled to medical inquiry, by medical methods, into their disease. They are entitled to judicial rulings when put on trial which shall be in accordance with the whole nature of their disease. He also urged that the claim made by courts that a knowledge of right and wrong is always evidence of responsibility is incorrect. The criminal insane should be confined for life and prevented from extending their disease to posterity.

Adjourned.

SECTION ON DISEASES OF CHILDREN.

TUESDAY, JUNE 6.—Dr. William Lee, of Baltimore, was called to the Chair, and Dr. Miller, of Iowa, was appointed Secretary. Owing to their being but few members present, it was voted to adjourn until Wednesday.

WEDNESDAY, JUNE 7.—DR. N. S. DAVIS, of Chicago, presented a paper on the *Means for Lessening the Mortality of Infants from Bowel Affections.* He began by stating that the importance of this could not be overestimated when it is remembered that one-third of the human race perish before they reach the fifth year. The chief disease among children was bowel complaint, commonly called summer complaint, and the popular cause attributed was bad food, indigestion, damp and illy-ventilated houses, impure and changed milk, teething, over-worked and unhealthy mothers and nurses, etc. Dr. Davis was confident that none of these causes exercise more than a minor influence in producing the disease. Children teeth, upon the average, in the winter as much as in the summer, and overworked and unhealthy mothers are not confined to the summer season. He gave statistics from the records in Chicago, showing that deaths from cholera infantum during different months of different years, the result of which was that he found the greater mortality to occur in the months of July, August, and September.

This result the speaker attributed to climatic changes which are prevalent at certain seasons of the year. That it is not simply high or extreme heat of temporary duration, such as that of a single day or of any number of days with cool nights, which favors the development of serious diarrhœa and cholera infantum, but continuous high temperature day and night through several days in succession. In cities where the air is close the difficulty is increased. That it is not the effect of one day or one thing is the fact that the sickness culminates after a period of unfavorable weather. The periods of high temperature are the ones so fatal, and when the period extends to fourteen days it has a very marked effect. When it lasts but two or three days the effect is very slight. This is due to the fact the higher the temperature of the air the less the oxygen in each cubic inch, and hence the air cells of the lungs receive a less amount of oxygen than is required for health. This creates a morbidly sensitive condition of the mucous membrane of the alimentary canal in conjunction with such a diminution of general tone as to impair the natural secreting actions, and thins the blood. The reasons why children of two years and younger are affected so much more severely than older persons are the less mature development and greater sensitiveness of the gastric and intestinal mucus membranes and glandular structures, and their much more constant confinement indoors.

The conclusions of Dr. Davis were that the greater importance for children of tender years was to secure pure air. One means which he recommended as within the reach of all was the giving to children a full sponge bath both night and morning, and securing the best possible ventilation.

DR. WILLIAM LEE, of Baltimore, presented some *Observations on Rickets.*

Adjourned.

CORRESPONDENCE.

A SERIOUS MICROSCOPIC BLUNDER.

To the Editor of THE MEDICAL NEWS.

DEAR SIR: My attention has just been called to a paper on "Cereal Foods under the Microscope," etc., by Ephraim Cutter, A.M., M.D., which appeared in *Gaillard's Medical Journal*, for January, 1882, and has since been extensively republished. As the whole basis of the essay is an unfortunate error, which does serious injustice to the cause of true science, and one which any hygienist, who is also a microscopist, ought to quickly detect, it is strange that the statements made by Dr. Cutter have not been criticised before this time with the severity they deserve.

Dr. Cutter asserts that the opaque, oval, or rounded cells (constituting the fourth coat of the wheat grain, according to Prof. Parkes) afford most of the gluten, and hence on their presence the chief strength of the food depends. He therefore declares that a large number (fourteen) of the food stuffs he examined, and found under his microscope to display none of these so-called "gluten cells," "contain no gluten" (page 9), and broadly intimates that they are consequently frauds upon the public. But the fact is these so-called "gluten cells" (denominated by Payen, *oleiferes*) probably include in their substance starch, phosphates, fatty matters, and coloring materials, containing only part, perhaps but a small part, less than one-seventh, of the gluten which exists in wheat. Thus Peligot, as a mean of fourteen analyses, gives the percentage of gluten in flour (whence "gluten cells" are removed) at 12.8, whilst in bran (containing nearly all the "gluten cells") it is only 10.84, and other observers confirm his statements.

If my friend, Dr. Cutter, or any of his disciples, would like to satisfy himself that he has made a lamentable mistake in this matter, let him take say ten grammes of one of the fine flours he asserts "contain no gluten," mix it with water into a dough, let it stand for half an hour, and then stir it in a porcelain capsule, with successive portions of water, until the starch is washed away, and the adhesive fibrillated gluten is left nearly pure, in the proportion, after drying, of from seven to twelve per cent. (*Vide* Parkes' Practical Hygiene, fifth edition, 1878, p. 224.) The small starch-corpuscles and granules, left by this process entangled among the threads of gluten, can be beautifully differentiated, by adding a drop of iodine solution, which affords the usual deep blue reaction with the starch, but dyes the gluten filaments of a yellowish-brown tint.

As additional evidence, let Dr. Cutter separate the gluten in this way from a sample of whole wheat flour, and then, examining under his microscope one of the bran particles which are deposited with the starch from the water used in washing the glutinous mass, he can enjoy looking with one eye at his hypothetical gluten cells, and with his other eye at the *real gluten*, prepared from the same identical sample, by the method long known to sanitary scientists, and of which the masticating process, used as a test for wheat by millers, and even by farm boys all over the country, is but a homely modification.

These little experiments will also be very interesting ones to manufacturers of the "food stuffs" Dr. Cutter so ruthlessly condemns, especially if the consciences of these gentlemen have been tormenting them for practising frauds upon the community.

I have in preparation a paper giving the results of a more complete investigation of this entire subject, which I propose to lay before your readers at an early day, if it proves to be of sufficient importance.

Very respectfully yours, etc.,

JOS. G. RICHARDSON, M.D.,
Professor of Hygiene and Demonstrator of Histology in the University of Pennsylvania.

PHILADELPHIA, June 16, 1882.

NEWS ITEMS.

BROOKLYN.

(*From our Special Correspondent.*)

ST. MARY'S HOSPITAL.—The articles of incorporation of this institution for the treatment of the diseases of females were filed with the County Clerk on June 12. A new edifice is nearly completed on the block procured for that purpose at St. Marks Place and Rochester Avenue. The building formerly used as the hospital will probably be continued in use as a down-town gynecological branch of the institution.

THE LONG ISLAND COLLEGE HOSPITAL held its twenty-third annual commencement on June 15, at the Academy of Music, Brooklyn. The graduating class was sixty-two in number.

CINCINNATI.

(*From our Special Correspondent.*)

THE NEW YORK CODE.—Very general satisfaction is expressed by the profession here at the action of the American Medical Association in regard to recognition of the New York delegates. The Academy of Medicine, when it appointed its delegates, adopted a resolution expressing its disapprobation of the Code of Ethics adopted by the New York State Society.

THE AMERICAN MEDICAL COLLEGE ASSOCIATION, which met here recently, was well attended, especially by delegates from the western and southern medical schools. The question of greatest importance before the Association was the expediency of demanding of all candidates attendance upon three courses of lectures, under the resolution adopted a couple of years ago, and which was to go into effect during the approaching session. It will be remembered that the most ardent advocates of this rule at the time of its adoption were the delegates from the eastern colleges. Our schools accepted it in good faith, and announced it in their circulars. But just before it was to go into effect, its leading advocates—the colleges which were well endowed and best able to bear the possible loss of members and revenue—withdrew from the Association. The comments upon the conduct of those colleges whose withdrawal compelled the Association in self-defence to rescind a resolution which all knew was in the proper direction—were by no means flattering to them.

THE ASSOCIATION OF SUPERINTENDENTS OF AMERICAN INSTITUTIONS FOR THE INSANE met in this city the first day of this month, and remained in session three days. The meeting was said, by some of the regular attendants, to have been an average one in size. While a number of interesting papers were read, considerably more time was devoted to the social features of the occasion. One evening was devoted to a reception by the medical profession of Cincinnati; the next

day to a visit to Longview Asylum and the Sanitarium; and a third day to a visit to the Dayton Insane Hospital.

MONTICELLO, N. Y.

(From our Special Correspondent.)

THE SULLIVAN COUNTY (N. Y.) MEDICAL SOCIETY AND THE NEW YORK CODE.—At the annual meeting of the Sullivan County Medical Society, held in Monticello, N. Y., on Wednesday, June 14 last, the following resolution was unanimously adopted:

Resolved, That the new Code of Medical Ethics, as adopted by the New York State Medical Society at its last annual session, be repudiated by this Society, and that we adhere to the Code of Medical Ethics of the American Medical Association, and that a copy of our action be forwarded to the Secretary of the State Medical Society.

HOMER, N. Y.

(From our Special Correspondent.)

CORTLAND COUNTY (N. Y.) MEDICAL SOCIETY AND THE NEW YORK CODE.—At the annual meeting of the Cortland County Medical Society, held June 14, the action of the State Society in reference to the new Code was the chief topic of interest. After full expression of opinion, the Society adopted the preamble and first resolution proposed by Dr. E. R. Squibb (see THE MEDICAL NEWS, May 27, p. 591). This action is a condemnation of the new Code. The resolution is as follows:

Resolved, That all the action taken at the annual meeting of 1881, in regard to changing the Code of Ethics be repealed, leaving the Code to stand as it was before such action was taken.

SHERWOOD, N. Y.

(From our Special Correspondent.)

THE CAYUGA COUNTY (N. Y.) MEDICAL SOCIETY AND THE NEW YORK CODE.—At the annual meeting of the Cayuga County Medical Society, held at Auburn on June 15, a resolution, approving the action of the State Medical Society in adopting the new Code, was presented and lost.

VIENNA.

(From our Special Correspondent.)

BILLROTH'S PORTRAIT.—Upon the 5th of May, Prof. Billroth presented to the surgical clinic his portrait, faithfully depicted by Prof. Angeli. For many years his students have requested of him this favor. He has always refused, partly because it was unpleasant to him to see himself hung up upon the wall, in effigy, as an historical character, partly because he was unwilling to entail upon his students material sacrifice in procuring an appropriate painting. Both objections have been removed, however, in the meantime, since Prof. Angeli has presented the portrait to the clinic and it will be hung up in the museum, and not in the operating-room. In concluding his remarks upon the presentation of his portrait, Prof. Billroth said:

"As Tizian's picture of Vesal in Florence and Rembrandt's portrait of Tulpius in Hague, so I wish my picture by Angeli to live in these rooms in remembrance of the alliance of art and science."

ARCHDUKE RAINER'S VISIT TO THE POLIKLINIK.—Archduke Rainer recently visited the Poliklinik, of which he has constituted himself the protector. He was received in the vestibule by Dr. Auspitz, and was conducted through the various departments. In the department of Dr. Mikulicz, Universitäts Docent, the Archduke examined the stomach of a patient with the recently invented gastroscope.

GENEROUS GIFT OF HOFRATH FRANZ RITTER V. SKODA.—Hofrath Franz Ritter v. Skoda has presented to the Burgomaster of Vienna 20,000 fl. in the name of his dead brother, Professor Josef Skoda, for the Vienna general sick fund.

HEALTH IN MICHIGAN.—Reports to the Board of Health for the week ending June 10, 1882, indicate that typhoid fever, has increased, and that bronchitis, erysipelas, measles, consumption, whooping-cough, inflammation of bowels, and pneumonia have decreased in area of prevalence.

Small-pox was reported present during the week ending June 10, and since, at 7 places, as follows: at Pontiac, June 7; at Flint, Detroit, Cadillac, and at Wayne County Pest House, June 10; at Port Huron (one immigrant, convalescent), June 11; at Grand Rapids (one death, June 12, 17 cases), June 14.

ONONDAGA COUNTY MEDICAL SOCIETY AND THE NEW YORK CODE.—At the annual meeting of the Onondaga County Medical Society held at Syracuse on June, 13, Dr. H. D. Didama presented the following preamble and resolutions:

Whereas, The Code of Ethics of the American Medical Association, promulgated in 1847, was soon afterwards adopted by the Medical Society of the State of New York, and afterward by the Onondaga Medical Society; by a provision of this Code consultation with practitioners who profess to be governed by an exclusive dogma is forbidden; it is the opinion of the Onondaga Medical Society that the State Society in assuming to repeal this provision and to sanction consultations with anybody and everybody exceeded its powers and justly forfeited all right to representation in the American Medical Association.

Whereas, It is also the opinion of the Onondaga Medical Society that the amendment to the Code adopted by the State Society is impolitic, unwise, hurtful to the interests of the profession and of the public; and that it merits, as it seems to receive, general reprobation. It is as silly to charge the regular medical profession with illiberality and want of progress because it will not consult with the advertising quack or the doctor who professes to give doses so small as to be beyond the ken of human imagination, as to make the same charge against the orthodox clergyman because he declines to invite the atheist to consult as to the best method of promoting evangelical religion. The regular profession is liberal, tolerating the widest differences of opinion; it is progressive, ready to test and welcome every new discovery in science and in the healing art; it points with just pride to all the glorious achievements of the past fifty years, in sanitary science and pathology, in surgery and in measures for preventing and alleviating pain, and shortening safely the course of disease; and it claims every one as the outcome of its progressing and investigating policy; therefore

Resolved, That the permanent members of the State Society from this county be requested, and the delegates be instructed, to use all proper means to secure the prompt repeal of the New Code, against which this Society protested at its winter meeting.

Resolved, That the Secretary furnish a copy of this preamble and these resolutions to THE MEDICAL NEWS of Philadelphia, the *Medical Record* and *Medical Gazette* of New York, and the Buffalo *Journal*.

In the discussion which followed: Drs. Kneeland, Dallas, Van de Walker, and Didama supported the proposition, and Drs. W. M. Smith, A. Mercer and D.

M. Totman opposed it. The resolutions were adopted by 20 votes in the affirmative to 6 in the negative.

THE ERIE COUNTY MEDICAL SOCIETY AND THE NEW YORK CODE.—The resolution approving the new Code, presented at the last meeting of the Erie County Society, was not "laid on the table," as stated in our issue of June 17, but its further consideration was unanimously postponed to the next meeting.

THE MAINE MEDICAL ASSOCIATION AND THE NEW YORK CODE.—At the Annual Meeting of the Maine Medical Association held at Portland, on June 14, the following resolution was unanimously adopted:

"*Resolved*, That the members of the Maine Medical Association, in convention assembled, being satisfied with the Code of Medical Ethics established by the American Medical Association, and believing that any departure from its fundamental principles would be derogatory to the medical profession, utterly repudiate the revised code of the New York State Medical Society, governing consultations, and will have no affiliation with it."

RESIGNATION OF PROF. V. LANGENBECK.—We understand that Prof. von Langenbeck has announced his intention of resigning his Professorship of Surgery in the University of Berlin at the close of the present session. An effort, however, is being made to persuade him to change his intention.

RESIGNATION OF DR. BIGELOW.—Prof. Henry J. Bigelow has resigned the Professorship of Surgery in Harvard Uuiversity, after having been connected with the school for thirty-three years. It is understood that Dr. Bigelow will be elected Emeritus Professor of Surgery.

DR. T. GRAINGER STEWART, Professor of the Practice of Physic in the University of Edinburgh, has been appointed one of the Queen's Physician in Ordinary for Scotland, in the place of the late Sir Robert Christison.

COMPARATIVE LONGEVITY OF THE JEWS.—M. Gustave Lagneau, in a memoir, "Sur les Différences Demographiques Presentées par les Juifs, les Protestantes et les Catholiques," presented to the Paris Academy of Moral and Political Sciences, states that in Prussia, in the Duchy of Baden, in Vienna, and many other countries, the highest rate of mortality exists among the Catholic population. Among the Protestant it is less. The lowest rate is observed among the Jewish race, and in all countries this inferiority persists. The same proportion, in an inverse sense, exists with regard to births.—*Brit. Med. Journal*, May 13, 1882.

VIRCHOW ON SOUPS AND BROTHS.—The distinguished German professor and politician has been accused of being the chief opponent of soup. He says that this is not true, for he had merely said that meat broths are neither nutritious nor "substantial." That if all the meat which one uses should be boiled and soup made of it, the meat would become for the greater part indigestible, and the soup would not be a substitute for it. Ordinary meat broth or bouillon in its pure form can only be recognized as a condiment. By the addition of eggs, flour, fat, and other things, it may acquire a certain nourishing and heating value. It is, primarily, only a very dilute aqueous solution of substances that are in part of low value as heat producers, such as gelatine, and in part of the stimulating aromatic parts of the meat. Taken warm, it is of nearly the same value as coffee or tea, but is inferior to wine, schnapps, or beer; it only stimulates the nerves. It has one advantage over every other condiment, namely, it contains no poisonous substance, it is incomparably milder, hence much better adapted to feeble persons; and finally it can be very conveniently combined with substances that are actually nutritious, and imparts to them an agreeable and "substantial" taste.—*Scientific American*, April 8, 1882.

SEA-SIDE CLIMATE.—As a contribution to the vexed question of the comparative climates of neighboring seacoast health-resorts, we print the following tables which we find in the *Cape May Wave*, condensed from the last report of the State Geologist of New Jersey.

Monthly maxima and minima of temperature—1875–1880.

MONTHS.	CAPE MAY.			ATLANTIC CITY.			PHILADELPHIA.		
	Max.....	Min.....	Range..	Max.....	Min.....	Range..	Max.....	Min.....	Range..
January	58	1	57	64	-3	67	67	-5	72
February	59	2	57	71	-5	76	67	-1	68
March	69	13	56	72	10	62	75	9	66
April	76	24	52	79	19	60	81	20	61
May	81	37	44	89	33	56	96	35	61
June	89	47	42	90	47	43	95	49	46
July	90	56	34	99	53	46	100	60	40
August	88	57	31	89	53	36	93	55	38
September	87	42	45	94	43	51	91	43	48
October	81	33	48	81	29	52	87	31	55
November	72	14	58	72	10	62	77	8	69
December	61	2	59	64	-7	71	65	-5	70

Average relative humidity—1877–1880.

MONTHS.	CAPE MAY.....	ATLANTIC.....	BARNEGAT.....	BALTIMORE.....	PHILADELPHIA..
January	77.2	80.9	80.2	71.3	74.8
February	74.3	77.4	74.1	66.7	70.5
March	74.7	76.7	75.7	64.2	67.6
April	75.5	76.7	75.7	57.0	62.1
May	73.2	77.3	76.2	59.8	61.8
June	75.0	81.0	78.4	62.8	66.3
July	77.9	83.2	81.8	64.9	66.9
August	77.3	82.3	81.2	68.5	70.6
September	76.1	81.3	78.3	69.9	70.0
October	73.3	78.4	76.6	67.4	67.6
November	69.1	74.8	75.3	65.7	68.6
December	73.7	78.2	79.3	67.7	73.5
Year	74.8	79.0	77.77	65.5	68.4

The more equable climate of Cape May, its greater warmth in winter and coolness in summer, is easily explained by the extent of water behind it in Delaware Bay. Why it should likewise be a drier climate is not so easy to understand.

A STRANGE STORY.—According to the *Allg. Med. Central Zeitung*, an extraordinary plot to murder a number of the medical men of Berlin has recently been discovered. The object of the proposed crimes appears to have been simply plunder, and the selection of medical men as the victims was owing to the diabolical consideration that the exercise of their profession rendered them easy subjects. Two individuals came one day to a police station and stated that they had arranged with a third person, named Wilke, to hire furnished rooms in different parts of the town, and, under the pretence of illness, to get a medical man to visit them, and then to murder him by means of a strangling instrument, which would first render him powerless.

They then proposed to throw the body into the water. The instrument was described as consisting of an iron collar, a sort of large steel pincer, of which one portion was fixed in a hollow iron tube, and the other was movable, and connected with it was a chain which passed through the tube and terminated in a ring. By pulling the ring, the two arms of the collar could be brought together with great force. The plan proposed was described as follows: Wilke was to play the part of the patient, and lie in bed with the garroting instrument by his side under the bed-clothes. When the doctor proceeded to his examination, he was to be seized by the neck with the instrument, while one of the accomplices was to pinion his arms from behind, and the third simultaneously apply shackles to his legs. A room had been selected which offered facilities for the disposal of the body in the water. The first victim had been selected in the person of a Dr. Lehrs, and the attempt was to be made on the evening of the day on which the announcement was made to the police by the two accomplices, who had become alarmed at the horrible nature of the crime. The police went to the house indicated, the occupier of which stated that a gentleman had taken a room in it, had paid a fortnight's rent in advance, and left in it a large box. This box, being opened, was found to contain fetters and an instrument answering in all respects to the description which had been given to the police. It was agreed that a pretended attempt should be made by the accomplices to carry out the plan, a police officer taking the *rôle* of Dr. Lehrs. In the evening, at 7 o'clock, Wilke met his accomplices at the house according to arrangement, went to bed, and sent one of his companions for Dr. Lehrs. Presently the man returned, accompanied by a spectacled gentleman, who announced himself as Dr. Lehrs. The drama went on exactly as had been foretold. As the pretended doctor stooped down to examine Wilke, his neck was seized with the instrument, while the assistants secured his arms and legs. The victim protested that he had no money with him, on which a document was put before him to be signed. On refusal, the collar on his neck was tightened. The half-strangled man then knocked on the floor with his foot, on which the police in an adjacent room rushed in and secured the would-be murderer. The man was found to be a tailor by occupation, and he stated that he had been two years contriving the instrument, having taken for a model an old-fashioned instrument of torture preserved in one of the museums of the city. It was stated that Dr. Langerhans, deputy in the Landstag, who lived near, was to be the second victim, and that subsequently rooms were to be taken in other quarters of the town for the benefit of other medical men.—*Lancet*, April 22, 1882.

CORRUPTION IN THE MEDICAL DEPARTMENT OF THE RUSSIAN NAVY.—At a recent trial at St. Petersburg of Privy Councillor Busch, Director General of the Medical Department of the Russian Navy, an extraordinary story of corruption was told. He was charged with receiving bribes from officers of his department for their promotion. One hundred and twenty-six navy surgeons came forward as witnesses, eighty-six of whom testified that the practice of paying the head of the department for promotions has been in existence for many years, and that Dr. Busch never promoted a surgeon without receiving payment in cash or by promissory note. One of the witnesses alleges that he had to make two such payments—one of 400 roubles in 1874, for his first promotion, and another of 1500 for permission to be transferred from the army to the navy. It also appeared that in 1877 a young surgeon was appointed to a higher position by the Governor of Cronstadt, and that Dr. Busch, on hearing of this threatened to cancel the appointment unless the surgeon would pay him 4000 rubles. The surgeon then paid Dr. Busch 3100 roubles, and was allowed to accept his new position.

NOTES AND QUERIES.

POISONING BY BORACIC ACID.

To the Editor of THE MEDICAL NEWS.

Dear Sir: My attention having been arrested by the notice of two cases of poisoning by boracic acid, which appeared in THE MEDICAL NEWS, I am induced to forward this testimony in a similar case.

A boy æt. three years; pyothorax of four month's duration. The left pleural cavity having been washed out with a saturated solution of this acid, the chest was thoroughly evacuated as I supposed. Sixteen ounces of the solution were used, and the patient was left as comfortable as usual, previous injections of Lugol's solution, properly diluted, having been used; but at this time I substituted boracic acid as a more innocuous antiseptic. In the evening I was notified that a rash had broken out on the patient, and was requested to visit him. I found him covered with a severe erythema, accommpanied by a very rapid and extremely soft pulse, suggestive of collapse, so that I prescribed acetate of ammonia and warm bottles. The next morning I repeated the acid injection, with an aggravation of the symptoms which had been ameliorated by the stimulants during the evening, this last injection being accompanied by extreme nausea and vomiting. The succeeding washings were accomplished by potass. permanganate, and in six weeks a cure resulted without further untoward action. I should have reserved this statement until I had repeated the treatment in a future case, but the item referred to in last week's "NEWS" has seemed to call for mine.

RALPH C. HUSE, M. D.

GEORGETOWN, MASS., June 13, 1882.

THE DISAPPEARANCE OF PLEURISY.

DR. CHENEY, of Brainerd, Minn., writes as follows: "Pleurisy used to be one of the most common diseases during the winter months throughout the Northwest; but in the last five or six years I have not seen a single uncomplicated case. Of course, we find it associated with tubercular affections, etc.; but I believe most intelligent practitioners in this part of the country will tell you that it has become almost extinct as an affection *per se*."

[Will any of our readers state the result of their observations?—ED.]

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JUNE 13 TO JUNE 19, 1882.

ELBREY, F. W., *Captain and Assistant Surgeon.*—To be relieved from duty in Department of the Missouri, July 1, 1882, and to report in person to the Surgeon-General in this city.—*S. O. 137, A. G. O., June 14, 1882.*

APPOINTMENTS—TO BE ASSISTANT SURGEONS, TO RANK FROM MAY 23, 1882.

WILLIAM E. HOPKINS, of California, vice Yeomans, deceased.
CHARLES C. BARROWS, of Mississippi, vice Brewer, deceased.
BENJAMIN MUNDAY, of Virginia, vice H. E. Brown, promoted.
GEORGE F. WILSON, of Oregon, vice J. M. Brown, promoted.
WILLIAM E. OWEN, Jr., of Tennessee, vice King, resigned.
PETER R. EGAN, of New York, vice Hubbard, promoted.
WILLIAM J. WAKEMAN, of Connecticut, vice Cones, resigned.
EDWARD EVERTS, of California, vice Whitehead, deceased.
—*A. G. O., June 12, 1882.*

MOFFATT, PETER, *Captain and Assistant Surgeon.*—Died at Fort Cœur d'Alene, Idaho, on June 15, 1882.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

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